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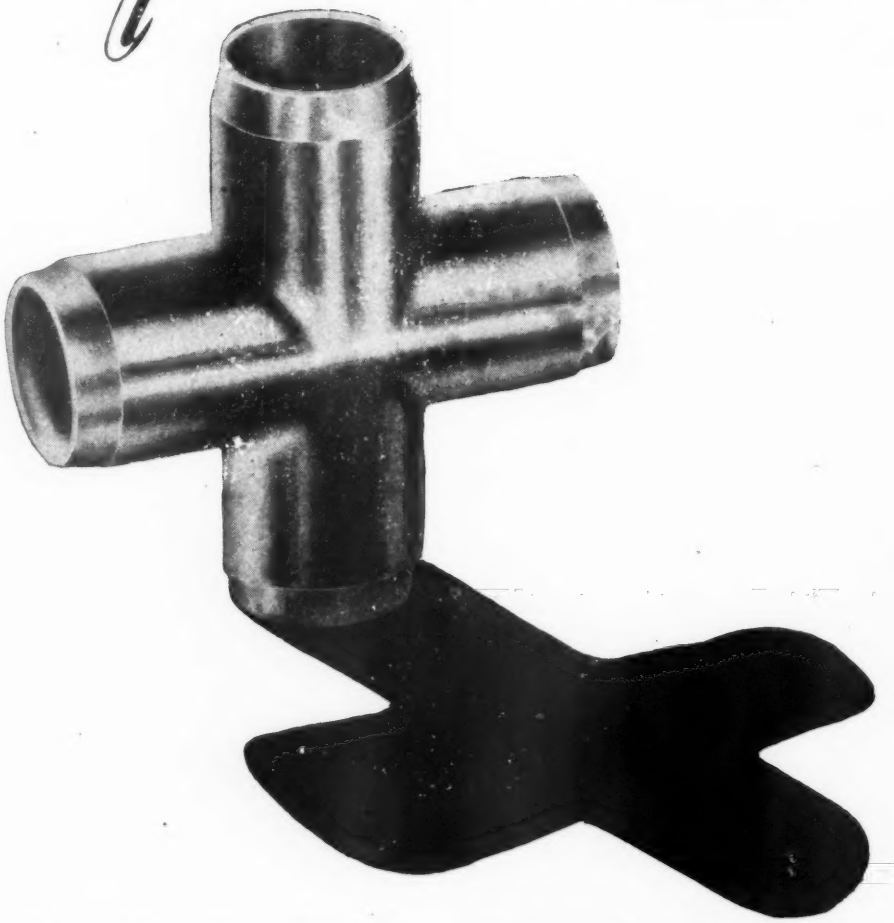

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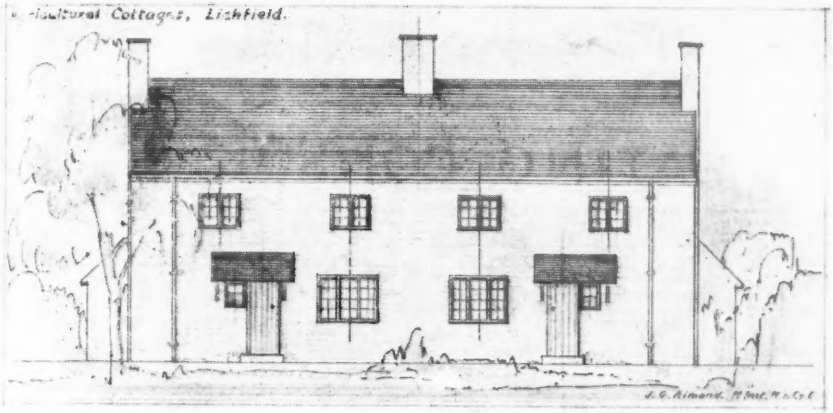

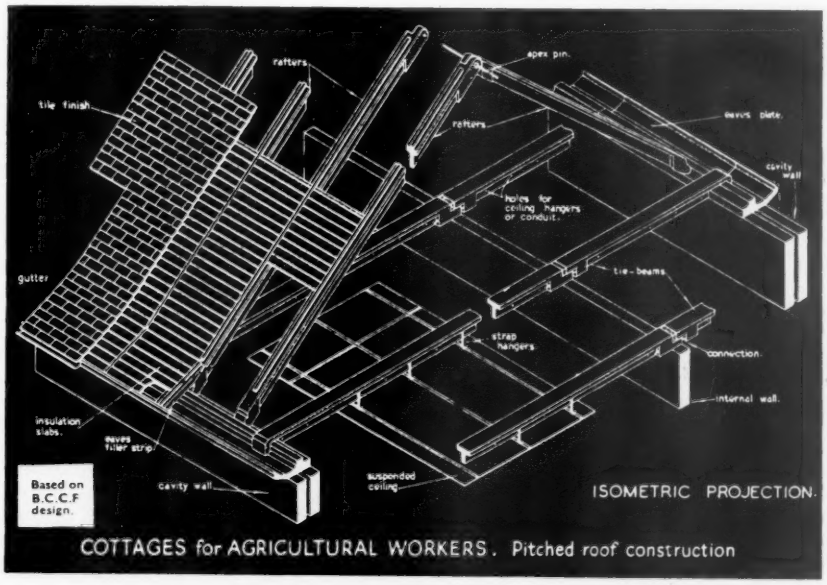

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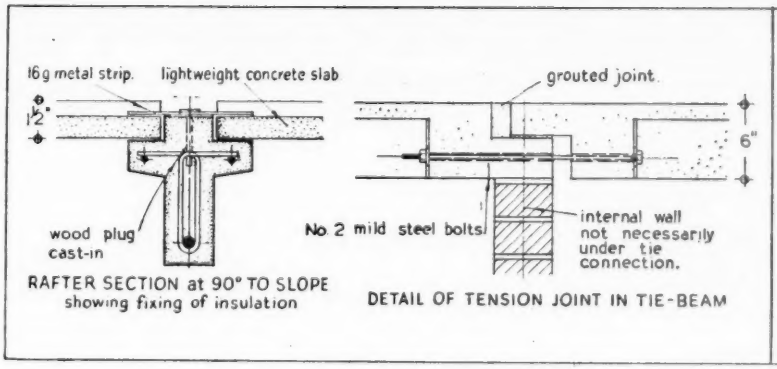
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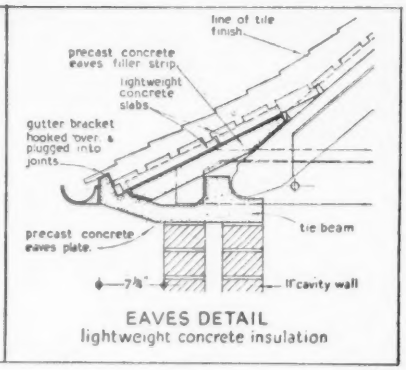

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Construction	Thermal Transmittance			Increase or decrease of cost of Insulation over Savings on Heating Plant	Number of years in which fuel saving pays for extra cost of insulation
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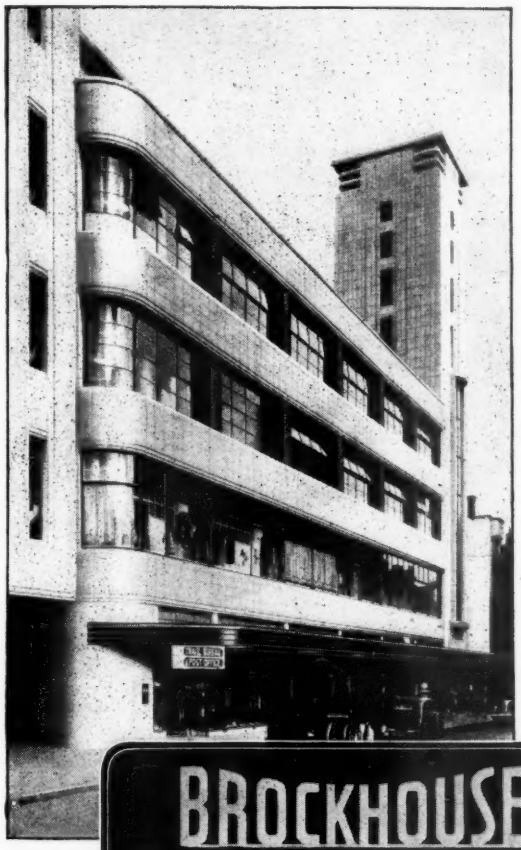

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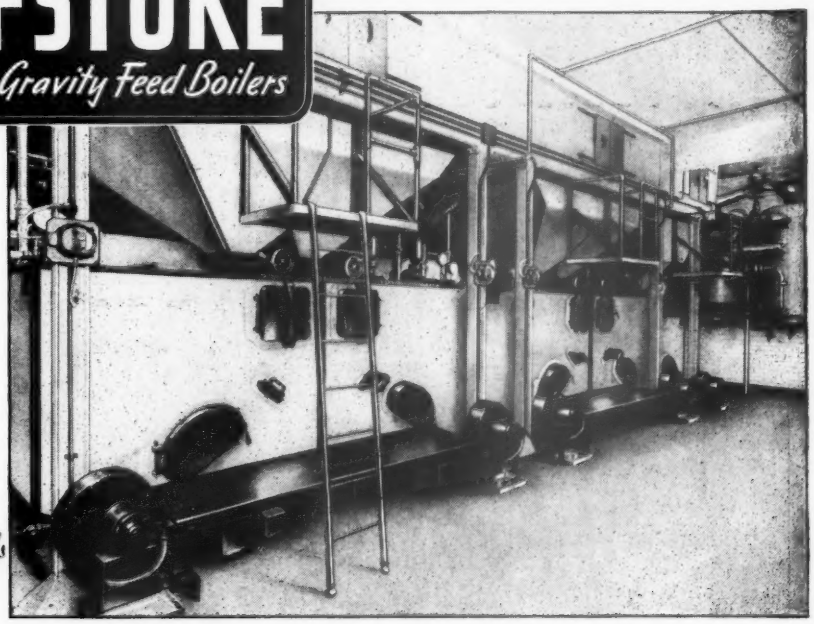

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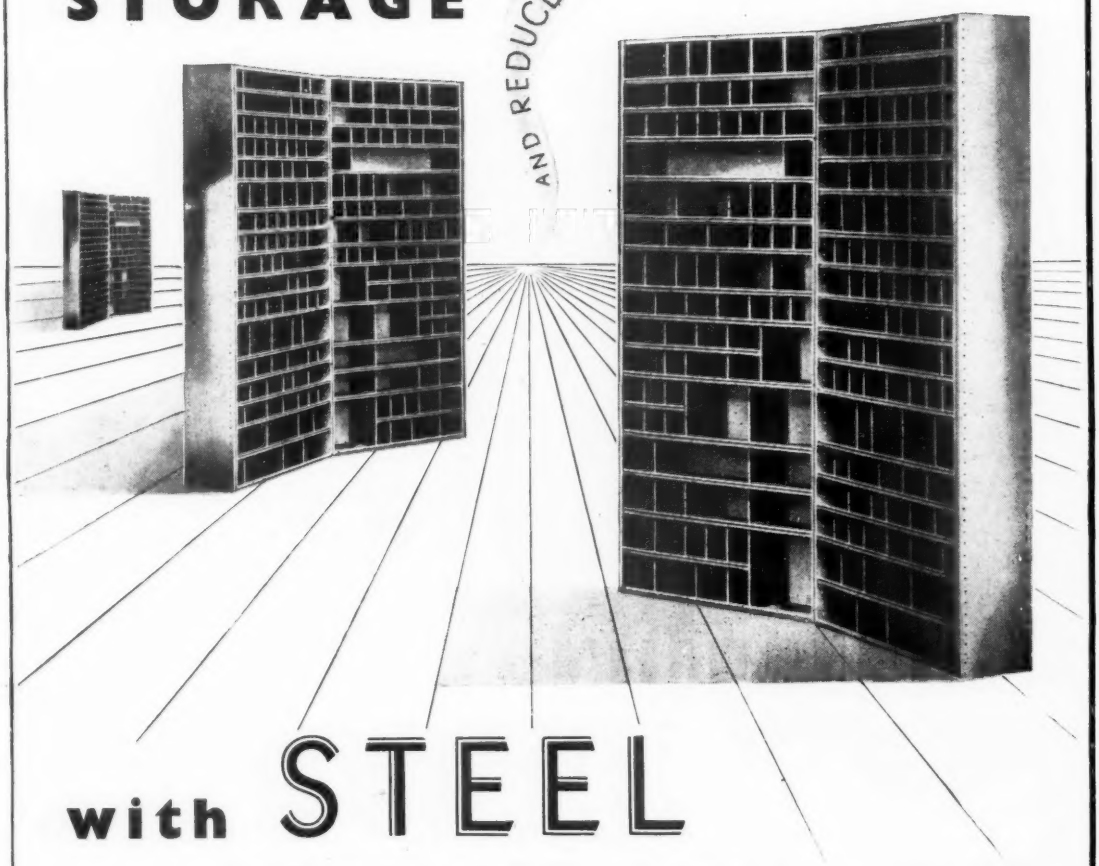

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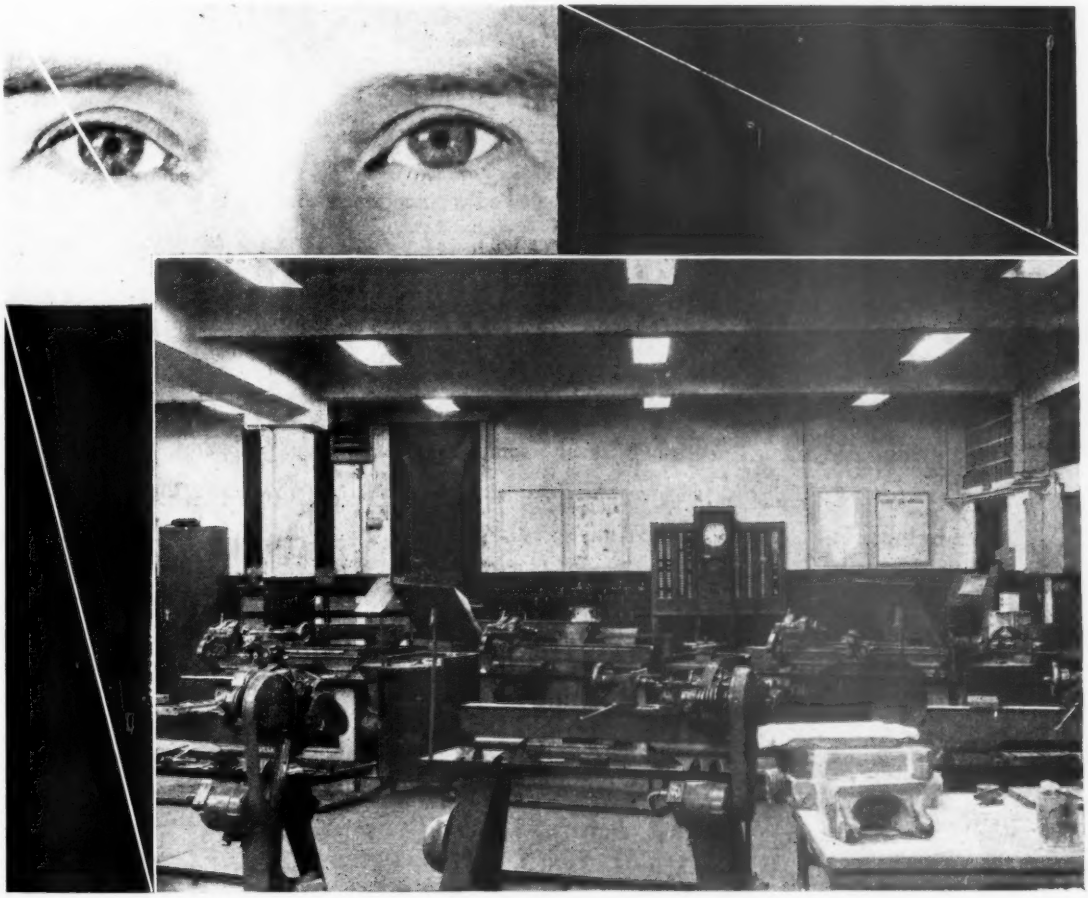

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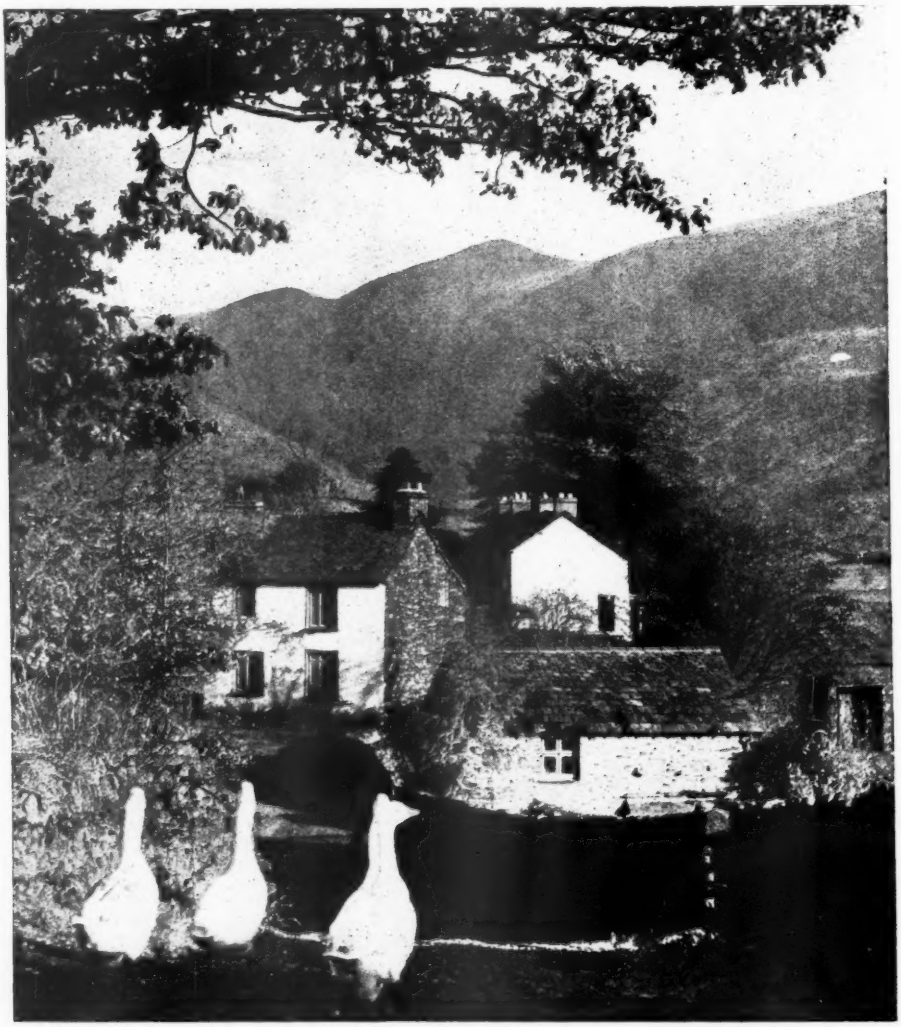

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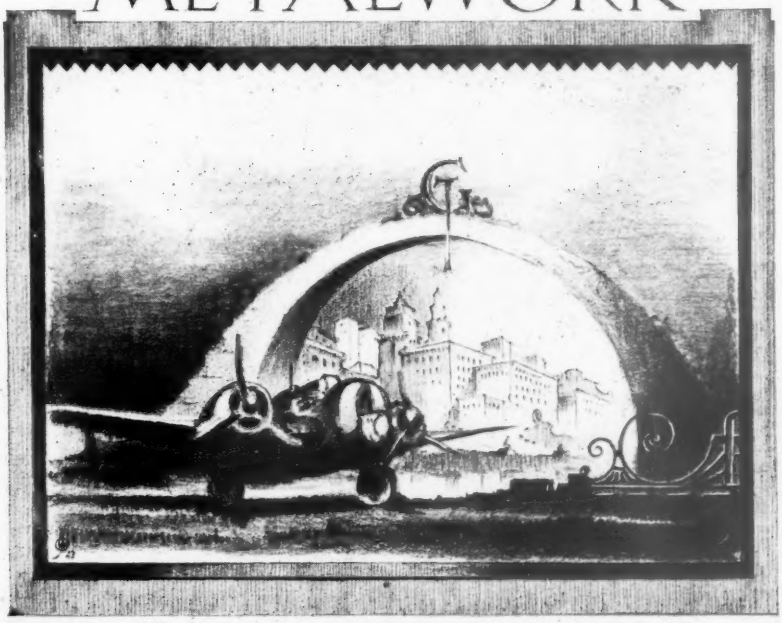

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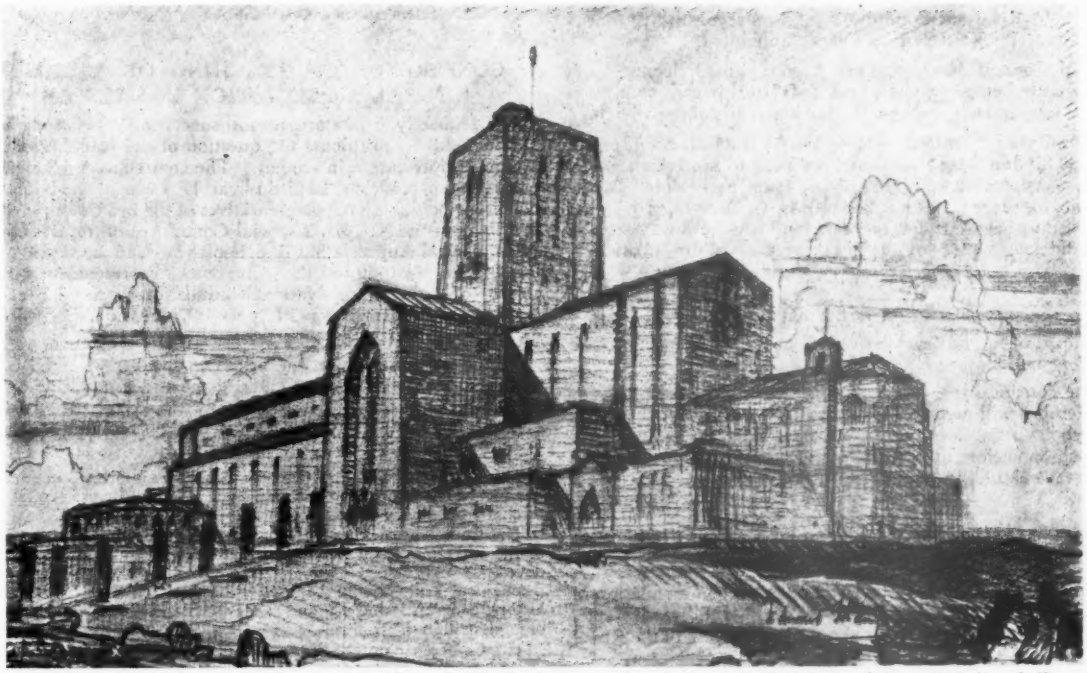
3rd Series] [Vol. 51

No. 3 JANUARY, 1944



Guildford Cathedral. A drawing by Mr. Edward Maufe of the complete design. A photograph of the cathedral as built so far and photographs of other buildings by Mr. Edward Maufe, Royal Gold Medallist, 1944, are given on pp. 54 and 55.

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A NEW YEAR MESSAGE FROM THE PRESIDENT

In wishing all Members of the R.I.B.A. a Happy New Year, may I express the hope that the close of the year will see, if not the end of the war, at least that end within measurable distance.

The past four years have been very difficult for the architectural profession. September 1939 saw all civil building stopped by Government order, and for the bulk of our Members, their normal means of livelihood destroyed.

The great majority of our young men are in the Forces, but for the older men there has been very little, except war damage, air-raid shelters, and a certain amount of work on military camps, hospitals, and aerodromes.

It was perhaps natural that, under these circumstances, there should be some discontent, and a feeling, however unjustified, that the R.I.B.A. could have done something to ease these difficulties.

In my message to you to-day, I want you to believe that the Council and Committees of the Institute are very alive to their responsibilities, and to the fact that your future prosperity lies very largely in their hands, and I would ask you, in return, to give them your loyal support and confidence.

The organisation of the R.I.B.A. is the most democratic of all professions, and the success or failure of its Council is the success or failure of the profession itself.

Let me give you a few examples of the Institute's activities.

A special Committee is making a complete review of the system of architectural education, in order to bring it into line with modern requirements. This Committee has been working for some considerable time and its report will soon be in our hands.

Another Committee is considering in what way the Architect can be of greater service to the community as a Town and Country Planner, and in this connection, numbers of Architects all over the country are working on Regional plans under a Central Advisory Committee, with a view to showing how Architects can contribute to the replanning of Britain.

The Demobilisation Committee is planning for the welfare of our Members who are now serving in the Forces with a view to setting up adequate machinery to ensure their return to professional life at the earliest possible moment.

The Practice Committee is tackling a general revision of the Scale of Charges which again needs to be revised and brought into line with modern conditions.

The Public Relations Committee has been reconstituted, and a new Assistant Public Relations Officer appointed.

Normal Council Meetings have been resumed, lectures and exhibitions are being arranged, and, as far as war-time conditions permit, it is intended to resume the full active life of pre-war days.

The Institute has suffered a great loss by the retirement of our Secretary, Sir Ian MacAlister, and we hope to mark his services to the profession in a suitable fashion at an early date. In the meantime, his place is being taken by Mr. C. D. Spragg, who has been Assistant Secretary for 17 years, and to whom we can look with confidence to carry on the high traditions of the Institute.

I have been greatly encouraged by the many letters I have received from Members, many from overseas, and I am looking forward to the day when the R.I.B.A. will not only be the administrative head of the profession, but will again be the centre of all its social activities.

Let me conclude with the hope that during the coming year every Member will give the Institute and its Allied Societies his or her whole-hearted support, so that, in the great and difficult task which lies before us, we shall be worthy to take our rightful place in the rebuilding of our country.

EDWARD MAUFE—ROYAL GOLD MEDALLIST FOR ARCHITECTURE, 1944

His Majesty the King has approved of the recommendation of the Royal Institute of British Architects, that Mr. Edward Maufe, A.R.A., F.R.I.B.A., M.A.Oxon., should be recipient of the Royal Gold Medal for Architecture, 1944.

Mr. Edward Maufe, who was born in 1883, is best known for his work as a church architect and as designer of the new Guildford Cathedral, but his work has extended over a wide range of architecture.

Among his more important buildings are the following :

GUILDFORD CATHEDRAL, which was won in competition in 1932 and was partly built when the war brought the work to a temporary close.

CHURCHES : at Clapham and Shepherds Bush for the Deaf and Dumb ; St. Thomas, Hanwell ; St. John the Evangelist, Hook, Hants ; St. George, Goodrington, S. Devon ; All Saints, Wiston Green ; Bishop Harrington Memorial Church, Hove, Sussex, and the First Clubland Church, Walworth, in which the church and club buildings were combined to make one of the most interesting church building schemes of the inter-war period.

COLLEGE BUILDINGS : New buildings for St. John's College, Cambridge, and for St. John's College, Oxford, his own College of which he has recently been elected an Honorary Fellow ; Richmond Wesleyan Theological College and Morley College, Westminster Bridge Road, London.

HOSTELS : Students' hostel for London Hospital and a hostel for St. John's College, Cambridge.

COUNTRY HOUSES : Far Scar, Grassington, Yorks ; Broadstone, Dorset ; Walton-in-the-Wolds, Leicestershire ; Kelling Hall, Norfolk ; Little Roothings, Essex, and many others.

BANKS for Lloyds at Dartford ; Amesbury ; Coventry Street, London ; St. Albans ; Cheam ; Bury St. Edmunds and Putney.

BROADCASTING STUDIOS : Cardiff and the Chapel in Broadcasting House, London.

OFFICE BUILDINGS for Commercial Cable Co., London.

THEATRES : The Playhouse, Oxford (with F. G. M. Chancellor) and the Festival Theatre, Cambridge, outstanding among English repertory theatres.

Mr. Maufe is the architect for the restoration of Gray's Inn and published his preliminary designs early this year.

Mr. Maufe served his articles with W. A. Pite, F.R.I.B.A. During the last war he served in the Royal Artillery and was A.D.C. to the General Officer Commanding the R.A. XXI Corps and during the present war Mr. Maufe is serving in the Observer Corps in his home county of Sussex.

He has contributed largely to the work of the R.I.B.A. of which he has been Vice-President and is now a Member of Council. He is a member of the Faculty Board of Fine Arts of Cambridge University.

He was elected an Associate of the Royal Academy in 1938.

CONFERENCE ON TEACHING OF ARCHITECTURAL APPRECIATION IN SCHOOLS

On Thursday, 6 January, a most successful conference was held at the R.I.B.A. to discuss the question of the teaching of architectural appreciation in schools. The conference was opened by the President and Mr. Basil Sullivan [*F.*] was in the chair. The conference consisted of representatives of the profession, including members of the R.I.B.A.'s special Committee on the Teaching of Architectural Appreciation in Schools who had been responsible for the preparation of the conference, representatives of the Board of Education, National education societies, teacher's bodies, etc., representing all types of education. In all about 70 persons attended.

At the morning session the principal speaker was Mr. Clough Williams-Ellis, who gave an enthusiastic and stimulating opening to the meetings. In the afternoon Mr. William F. Morris, Headmaster of Alfred Sutton Central School, Reading, proposed the following resolution :—

This Conference of school teachers and others interested in education has met at the invitation of the Royal Institute of British Architects to discuss the teaching of architectural appreciation in schools.

The Conference wishes to record its conviction that an appreciation of the ways in which men have built—as spirit and ambitions have developed and under varying conditions of climate, of materials and of mechanical skill—should be used to link together such subjects as history, geography and art, and relate them to a child's own experience of familiar things.

The Conference fully realises that appreciation of this type cannot be evoked in children on any wide scale unless it is first evoked in their teachers, and appeals to the Board of Education to consider how this might best be achieved.

The resolution was carried *nem. con.* after a discussion in which most of the salient problems of technique and opportunity were thrashed out in some detail.

The chairman stated that the Royal Institute now proposed to request the President of the Board of Education to receive a delegation who would present the resolution from the Conference.

In connection with the conference an Exhibition was held of architectural and town planning drawings and models made by children in English schools.

NEW YEAR HONOURS

The following members received honours in the New Year list :

O.B.E. Mr. W. F. Dickinson, J.P. [*F.*].
Mr. John Creese [*A.*].

M.B.E. (Military Division) Major S. W. Milburn, R.A., T.A. [*F.*].
(Civil Division) Mr. W. B. Wheatley [*F.*].

The following honours will be of interest to many members of the profession :—Mr. F. P. Robinson, Secretary M.O.W., received the K.C.B. ; Mr. W. R. Fraser, Secretary of the War Damage Commission, and Mr. J. C. Wrigley, Joint Deputy Secretary of the Ministry of Health, received the K.B.E. ; Col. A. H. Killick, D.S.O., M.C., Secretary of the Chartered Surveyors Institution, received the C.B.B. (Military Division).

An INFORMAL MEETING will be held at the R.I.B.A. on Tuesday, 15 February 1944, at 5.30 p.m., when Mr. T. P. Bennett, C.B.E., [F.], will read a paper on "War Experience on the Organisation of Building Contracts."

SIR EDWIN LUTYENS, O.M., P.R.A. [*F.*]

By H. S. GOODHART-RENDEL [F]., *Past-President*

With the death of Sir Edwin Lutyens there passes from the scene another of the British architects who, since the unknown designer of Ottery St. Mary church, have been laws to themselves for the future wonderment of historians. Wren, Hawksmoor, Soane, Street, Shaw, Lutyens, what an impressive but inconsequent succession they make! Conforming to no system, unless it be that the affinity between the first named and the last show variation to be going round in a circle. Very English they all were; inventive, resourceful, and endowed with the power of commanding opportunity and enrolling disciples. Men who for the most part felt before they thought, but who, when forced to it, could think as vigorously as they acted. Men strongly distinguished by their enthusiasm and ego-centricity from the other dynasty that shared their rule—from the philosophic line of Dance junior, Chambers, Cockerell, Barry, Butterfield, Pearson, Burnet. Men whom, perhaps, we cannot expect people outside this country to see with our eyes, but whom no Englishman can have any difficulty in loving and applauding.

Sir Edwin youngly began to serve his art, designing in his 'teens—or at any rate in his legal infancy, various small buildings in Surrey. Of these the lodges at Park Hatch, the barber's shop at Shere, Manstead Corner, and the first part of the house at Crooksbury have nothing that is not found again and again in the work of his master, Sir Ernest George. He could not then have chosen a more congenial model, since by that time Sir Ernest had simplified his cottage style into a rural idiom of great charm. Charm was obviously the young pupil's preoccupation, and the next house he built, that of Chinthurst Hill, while still predominantly Ernest-Georgian, is as charming as can be. This house is planned with a recklessness of economy and convenience from which the elder man would probably have shrunk, but both master and pupil were picture-makers, planning pictorially rather than practically, until the ends of their lives. In the red brick house in Effingham village, and in the additions to Stoke College in Suffolk a germ is visibly working; each is more recognisable to us as Lutyens than anything he had designed before. I do not know the date of the unfinished church at Knebworth but I suspect that it should be classed with these other *juvenilia*. What exists of it is not at all promising.

The first full development of Lutyens' architectural individuality appeared in a remarkable group of houses:—Fulbrook, Orchards, and Munstead Wood, all built of Bargate stone walling; and the Deanery Garden at Sonning built of brick. At the edge of the group stands the slightly more formal design of Tigbourne Court and of Monkton near Sir Ernest George's important work at West Dean—the first of stone, the second of brick and, unlike all the others, with wooden casements. More formal again, though still in the same category, are the white walled dower house at Knebworth, with its primly pilastered front to the garden, and the gabled but highly symmetrical Little Thakeham.

The charm of all these houses is elaborate and compelling; and—although some of the potency with which it enthralled my generation may have evaporated—there can be few people insensible of it, even among the young. The apparatus with which it is produced is the apparatus of Shaw and George—the long level ridge of a great roof that usually sweeps down in some part nearly to the ground, the high massive chimneys, the exhibition of oaken carpentry, the small much divided casements pushed right up under the eaves or floating in a sea of plain wall. But in Lutyens' use of this apparatus we observe a new freedom. Shaw always, and even George frequently, planned their houses with an economy and directness inherited from eighteenth century tradition; the elevations might be as romantically charming as such economy and compactness would allow, but inevitably in the exterior of so close a conglomerate chimneys might pierce roofs in embarrassing places and windows be compulsorily larger and more crowded than an architect working in the old farm-house manner would wish. Lutyens never would have any of this compulsion at all. He planned his elevational effects from the outset. If the picture in his mind allowed only of very small windows, then additional windows had to be contrived round the corner, or the plan had to be made only one room thick at that point so as to allow of windows at the back. When I was young it used to be whispered in offices that Sir Ernest George on first designing a house dashed off two sepia perspectives and a sketch plan of the ground floor only, leaving the rest to be worked out afterwards. I do not suppose the tale was true of George, and it certainly could never be true of Lutyens, whose plans have a scenic effectiveness that testifies to the working of his mind upon them from the beginning. But they are picture-maker's plans serving with greater fidelity pictorial needs than practical. And for what they are they are often superb.

Of the early group of houses which I have now enumerated, probably Munstead Wood is the most completely successful. It was built to suit that wonderful friend Miss Gertrude Jekyll, and suited her to perfection. Seen in conjunction with the famous and lovely garden around it, no modern English house has to me more magic than this one, and with that abiding magic is mingled the memory of its owner and her touching pride in the architect whose young mind she had fed with so much nourishment. One who remembered "Miss Gertrude" before Lutyens was born used to tell me of the country crafts she practised and the country lore she collected in her girlhood; of the love she had always had for the stuff from which his designs were afterwards to be fashioned. She fostered his talent, helped him to opportunities, and exulted in his success.

A slightly later house in which the idiom of the early group is very satisfactorily simplified is that called "Grey Walls" at Gullane near North Berwick. This I have always thought to be a peak in the range of his achievement, the garden front being most happily proportioned, and the concave segmental entrance front brilliantly managed. The latter is an experiment that having succeeded was, wisely, never repeated. The more ambitious experimental planning of Papillon Hall had perhaps better never have been tried at all.

Both Daneshill and Marsh Court have always seemed to me too much of a good thing; designs of size so considerable made with such a shrinking from formality belong to a Victorian frame of mind that has passed. At Marsh Court is one of those complicated gardens full of architecture and water which photograph very well but do not perhaps add very greatly to the pleasure of life. There is another such garden at Buckhurst Park, made round a pseudo-Elizabethan house to which Lutyens added a very characteristic music-room. The builder's-yard kind of garden, to which he always inclined, found a magnificent occasion at Delhi where circumstances make it not only successful but highly appropriate.

In all these houses except the very earliest there are details here and there of a pronounced neo-Classical flavour, often provokingly placed in exaggeratedly homespun surroundings. This sort of quaint incongruity, this sort of friendly slapping of the classics on the back reminds me of the school of sentiment represented in literature by the works of the late Sir James Barrie. It makes you cry, either with happiness or with vexation according to your idiosyncrasy; if it is to be done at all it could probably not be done better than Lutyens did it in the hall of Little Thakeham. In a big house built toward the end of his life he made the same joke through a megaphone, placing a large tetrastyle portico in the side of what looks rather like an enormous Normandy grange.

At first sight his uniformly neo-Classic designs seem based upon another thesis than this, but if we analyse them we find that

however demurely worn may be the livery of the great style, quaintness and fantasy are never far away. Temple Dinsley, Great Maytham, the Salutation at Sandwich, and the London houses in St. James's Square and old Westminster, are designs it is convenient to call Wrennian (although the rarity of houses designed by Wren makes the epithet allusive rather than exact). Of the three in the country only the Salutation is entirely new, but the other two have become his in the handling. All are delightful and formally dressed, the country gentleman *en habit*. All have lavish plans in different degrees and many internal beauties.

Nashdom I could never regard as anything but a failure, with its façade that breaks down in the middle and its disproportionately large staircase. The very elaborate villa at Ilkley is hard to beat as an example of architectural congestion in a small space, but displays some striking feats of *bravura*. The British Embassy at Washington is large without grandeur and has never, I think, been regarded as one of its author's successes. A design of equally domestic character which, on the other hand, has never had said, or deserved to have said, a word against its excellence is that of the Offices of *Country Life* in Covent Garden.

The design of the little bank next St. James's Church in Piccadilly shows the same certain handling, but with a slightly disconcerting preciousness from which the earlier design for *Country Life* is free. Very different from either of these is the large block of offices on Finsbury Circus, in which movement and grandeur are secured at a cost of utility that city magnates seem always eager to pay. Similarly faced with Portland stone, but earlier in date and much smaller, is an agreeable little office building on the east side of Kingsway. Both in Finsbury Circus and in Kingsway there is a *brio* that in Lutyens' later attempts at commercial buildings seems to me to have been lost. Many of his admirers will regret that his name should be connected with such forlorn hopes as the making the best of Grosvenor House.

The transcendent skill that Lutyens possessed in the pictorial combination of building forms and the lovely shaping of those forms in themselves were acquired in the practice of domestic architecture, and it is therefore upon his domestic architecture that any estimate of his total achievement must in the first place be founded. He worked in an age that was gradually losing all fixed standards of artistic propriety, but which was still susceptible to the poetry of form. With little law beyond his own mood, sometimes his own whim, he did, in his art everything he felt inclined to—suitable things, unsuitable things, logical things, illogical things; and he did them all quite beautifully. In his many efforts to recapture completely the architectural atmosphere of the late seventeenth century he set himself a peculiarly difficult task, since in that atmosphere so many elements were accidental at the time and at any other time must be evoked artificially. The fascinating confluence of fine craftsmanship, sound and comely building materials, native tradition, French and Dutch fashions, that had mingled with the products of a brilliant and slightly perverse invention to produce what most Englishmen worship as WREN—that confluence, if a Wren Redivivus was to bring it together again, had to be all his own work from the start. This was sometimes Lutyens' undertaking, and so great were his powers and gusto that he often ran past his goal and improved upon his model.

I believe that responsible criticism will eventually agree that Wren in the design of St. Paul's Cathedral was faced with a task a little too big for his mercurial, opportunist method to tackle. No one can deny the superb mass and contour of the external dome and lantern, nor the highly satisfactory proportions of nave and aisles seen in cross-section; and the beauty of many of the details in stone, iron, and wood is notorious. But against these must be weighed the many disastrous expedients into which Wren was led by his habitual disregard of the nature of things and by his complaisant acceptance of compromises pressed upon him by circumstances. The extraordinary internal disguise of the main support of the dome, and the sham external heightening of the aisles are well-known examples of the former; the division of the whole exterior into two small superimposed orders so as to avoid the costly stonework of one large one is an example of the latter.

Lutyens was incapable of mistakes of this kind, although he sometimes let his great tenderness for the memory of Sir Christopher support him in small cognate naughtinesses. The design that he has left behind for a cathedral grander than St. Paul's is a miracle of self-assurance and consummate technique, and promises a wonder of Christendom. So relatively small a part of the huge area covered will have any view of the High Altar that the conception may be said to be architecturally that of a pantheon, of a fusion of numerous very stately temples; in the central and largest of which will assemble the worshippers at the principal rite. When it is realised that that central temple can contain the congregation to be expected in a city of the size of Liverpool, the dimensions of the whole stagger the imagination.

To most of us the entire conception needs more intense study than has yet been possible before it can be critically judged. That its author should not be here to guide its realisation and growth is a major architectural tragedy.

The largest undertaking that Lutyens brought to a conclusion was his share of the great works at New Delhi, where, in spite of the disasters that always seem to attend architectural collaborations, his personal achievement is of outstanding excellence. At Delhi there could be no country gables or Surrey carpentry to set off the solemnity of dome and portico—but charming, veiled, allusions to native architectural forms are brought to serve the same purpose. The front of the Viceroy's House shows its designer's technique, and his peculiarities, at their highest. Nothing could be better done, and nobody else could have done just that thing.

It is unwise and unbecoming, when a distinguished man has just died, to compare his merits and achievements with those of men whose accounts have already been settled by history. That Lutyens' originality, invention, sensitiveness, and skill, were outstanding cannot I think be questioned, and these qualities in an artist are those that dazzle the most. He was always opposed to the school of architects that proclaims itself *Modern*, recognising in them a romanticism not genial, as his was; and self-deluded, which his was not. He had the Renaissance—(and indeed the Victorian)—artist's exhibitionism, imposing his own artistic personality in season and out of season; and the personality was one that generally received a warm welcome. Whether by the reality of his buildings or by their photographic illustrations he gave to thousands of his generation happy dreams, and dreams were what they needed. He was a magician, a spell-binder, and few of us have not been in thrall to him. Those of us who had his friendship deeply grieve his loss. He seems to leave behind him a grey world, full of grim architectural Puritans on the one hand and gentleman-like architects who do the done thing on the other. He took Shaw's place, but who is to take his?

Mr. Curtis Green, R.A., writes:

By the death of Sir Edwin Lutyens we have lost one of the greatest artists and one of the great men of his time.

Each of his houses with their gardens was a work of art, fresh as the morning, fragrant of lovely yesterdays.

Lutyens was unusually fortunate in the early recognition of his genius, each new work leading on to the final masterpieces of the Vice-Regal Lodge at Delhi and the Cenotaph.

A friendship of over 30 years entitled me to a place among the speakers when, in 1941, the Council of the Royal Institute of British Architects entertained Lutyens, with other architect members of the Royal Academy, to celebrate the award of the Order of Merit by the King in recognition of his fame.

I said on that occasion:—

Fifty years ago Willie Lutyens, your guest's younger brother, won the mile for Cambridge, and continued to do so four successive years, breaking the record in 1894. He held the record for the 1,000 yards for 31 years. He is one of a record breaking family.

My elder brother was at the same college, one summer he brought Willie to stay with us. He told us of his brother Ned; according to

him Ned was at that time the leading architect in London, consequently in the world. He, Willie, was a most engaging fellow, a first-rate family trumpeter, now a Canon of Rochester.

Forty-two years ago I was admiring his brother's work for H.M. Government in the British Pavilion at the Paris Exhibition of 1900. He was then, I believe, installed in what had been Norman Shaw's house in Bloomsbury Square. You will have heard of his superb room, forerunner of many to come, with its green floor, its highly polished black walls, a mirror for the gold and vermilion of a gorgeous Coromandel Screen, the green of the floor, the hangings and the covers.

It was not till, I think, 1910, that I was introduced to him, sitting next him at a dinner. He asked me if I was busy. I said "unfortunately I am not." Next day I was rung up. "Would I call on Mr. Lutyens at 11 o'clock the following morning." This is, I believe, a full and substantially accurate account of that five minutes' interview.

"Hallo, Green, I like your work, do you like mine?" I said, "Of course I do." He said, "I am going to Delhi to-morrow, will you come round and look over the boy's work." I staggered to and fro, and said, "What do you want me to do?" He said, "Oh, look round, I am awfully busy, good-bye, thank you so much."

I think that is a revealing story of a spell-binding personality, inspiring both affection and ungrudging service.

In those months I looked round and I learned a very great deal.

Many of us feel, as I do, that we cannot over estimate what we have learned from him and through him. I know that is so with my partners, my son and my son-in-law, Tony Lloyd. Many of us feel that he has done more for architecture than any of his predecessors since Sir Christopher Wren.

He opened up and cleansed the springs from whence we drew inspiration.

Here is something more than cleverness, fertility, resource or taste. There is about his work, a harmony, a serenity, a lilt, qualities more usually associated with great music.

On analysis it might be found that an early and continuous preoccupation with geometry is one of its elements.

It has been said that "Euclid alone has looked on beauty bare."

To serve art faithfully requires the whole man. Lutyens has dedicated himself and his life to this great purpose, and we celebrate his country's recognition of his achievement to-day.

Lord Melbourne said:—"What I like about the Garter is that there is no damned merit about it."

What we like about the "Order of Merit" is that there is no damned nonsense about it, you have to earn it.

He has enriched his day and generation and specially his fellow artists. We are thankful for his incomparable art, we are thankful for his incomparable self. We delight in the noble simplicity and sincerity of the one, the wit and the affectionate and childlike quality of the other.

May he rest in peace.

THE FUNERAL OF SIR EDWIN LUTYENS

Born 29 March 1869
Died 1 January 1944

It falls to few Englishmen to be honoured by an Abbey Funeral, and those who were present at that most moving ceremony at Westminster on 6 January will never forget it.

The greatest architect of his generation, it seemed fitting that this last tribute to him should take place in the most sacred of our national shrines, with a service so steeped in tradition and dignity.

The Dean and Chapter and the other Officers of the Establishment of the Collegiate Church, with the Bishop of London, preceded the body, in copes of black and gold, headed by the Processional Cross. The choir were in white and scarlet, with their Tudor ruffs. The pall was of white silk, embroidered with the rich heraldry and emblems of the Royal Abbey. The pall-bearers were the Earl of Lytton, Viscount Ridley, Mr. Robert Lutyens, his son, Sir William Reid Dick, R.A., Mr. W. Russell Flint, R.A., Sir William Goscombe John, R.A., Mr. Sydney Lee, R.A., and Mr. Curtis Green, R.A.

The coffin was followed by Sir Giles Gilbert Scott, R.A. and Mr. Vincent Harris, R.A., carrying the Insignia of Sir Edwin, the coveted Order of Merit, the badge of the President of the Royal Academy, the Knight's insignia of the Star of India.

Then came the members of the Royal Academy.

Slowly the clergy mounted the steps to the soft candle light of the Sacrarium, that contrasted with the soulless electric lighting of the choir.

The coffin, covered with the pall, was placed on its high catafalque, beneath the soaring arcades and vaults of the Crossing, with six great amber candles, on high candlesticks, on either side.

The age-old ritual, the familiar liturgy, the beauty of the music, the slow, measured tempo, all contributed to a service that was itself a work of art.

The lesson, from the xxxviii Chapter of Ecclesiasticus, had particular relevance for a great artist and town-planner, and one who did so much to foster and encourage fine craftsmanship.

> "He setteth his mind to finish his work, and watcheth to polish it perfectly . . . .
>
> All these trust to their hands: and every one is wise in his work.
>
> Without these cannot a city be inhabited: . . .
>
> But they will maintain the state of the world, and all their desire is in the work of their craft."

Those who knew him well, who knew the intense seriousness of the artist behind the smoke-screen of wit and fun, could not but be struck by one prayer that the Dean intoned from the steps of the altar:

> "May he, as of old, choose 'the foolish things of the world to confound the wise, and the weak things of the world to confound the things that are mighty.'"

In Vasari's *Lives* it is recorded that the great Humanist artists and architects were, as a rule, laid to rest in the Pantheon of St. Peter's. Of Baldassare Peruzzi he wrote:

> "He was much lamented by his children and friends and was buried in the Ritondo near Raphael, being followed to his grave by all the Painters, Sculptors and Architects of Rome."

Edwin Lutyens, the great Humanist architect of his age, was likewise followed by his fellow artists at the great Abbey funeral, but the architects in the congregation were swallowed up by a congregation truly national, almost Imperial in its composition. When Sir Christopher Wren died, he had outlived his day, and had been most unfairly dismissed by George I, but King George VI was represented at the Abbey, and the Prime Minister, and every phase of our English life seemed gathered together to pay tribute to a great Englishman who had become a national institution.

So he passed to his rest, full of honour, whilst the organ played Chopin's *Marche Funèbre*, and the bells of the Abbey Church, half muffled, rang a peal. It symbolised the end of an epoch in English architecture and ways of life.

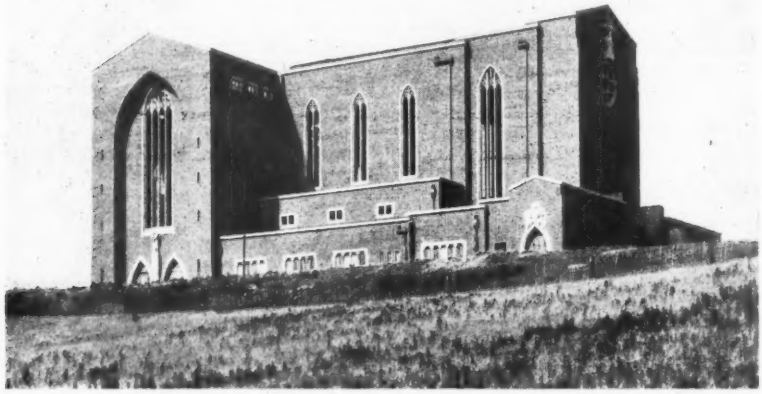
Generations yet unborn will place him among the Immortals.

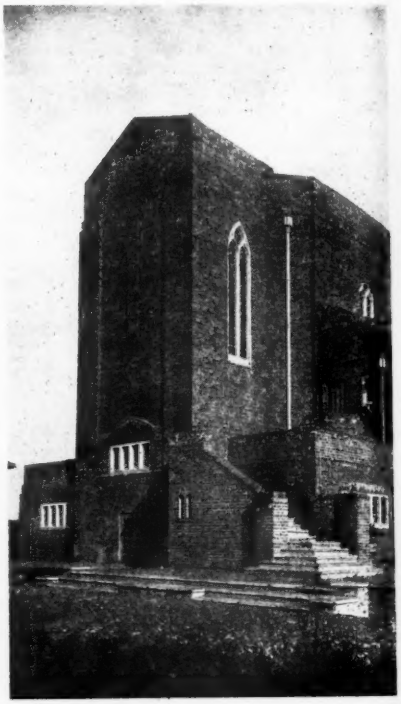
J. H. W.

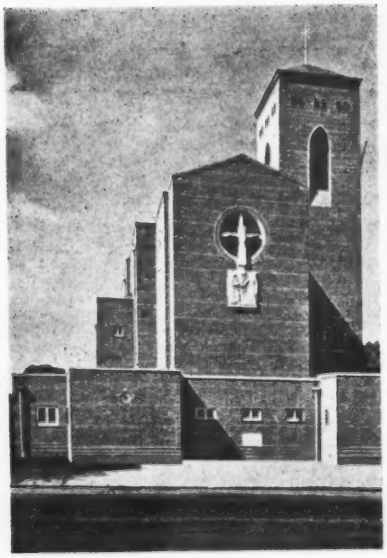
BUILDINGS BY Mr. EDWARD MAUFE, A.R.A.

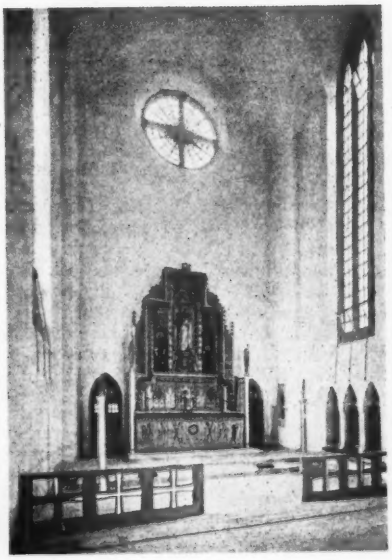
ROYAL GOLD MEDALLIST, 1944

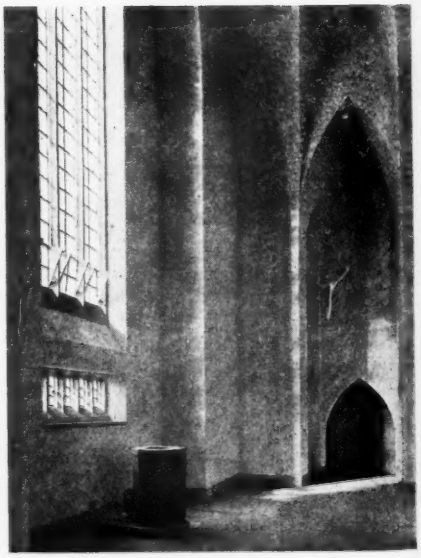
Top left : Guildford Cathedral, the present state.
Middle left : The Playhouse, Oxford (exterior only).
Middle right : St. Saviour's, Acton.
Bottom : St. Thomas the Apostle, Hanwell.

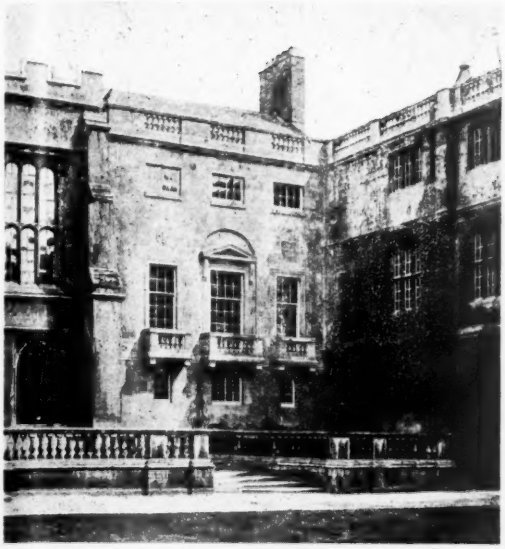


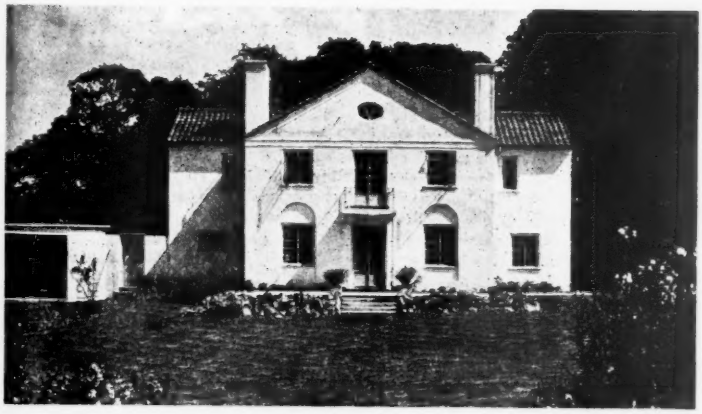












Top left : Trinity College, Cambridge—Combination Room, Façade to Nevile's Court.

Top right : Kelling Hall, Norfolk.

At left : Pretious Field, Northiam, Sussex.

Bottom : The Library, Wesleyan Theological College, Richmond.

ENGINEER AND ARCHITECT

POSSIBILITIES OF COLLABORATION

By HERBERT J. ROWSE [*F.*]

Being a lecture in the series of lectures on Engineering Economics, Management and Æsthetics, arranged by the Council of the Institution of Civil Engineers in conjunction with the Senate of Cambridge University

When I received the invitation from Professor Baker to give this lecture, I at first felt some uncertainty as to whether my qualifications were such as to enable me to speak to you with sufficient authority, but on reflection I may perhaps claim some justification on the grounds of a fairly long practice, both in works falling within the normal categories of a diverse architectural practice, and further in association with other works within the sphere of your own calling, sufficient at least to have given me some insight into the problems which beset our two professions.

I desire, however, at the outset to disclaim even the appearance of coming before you to lay claim to any superior position for my profession, when compared with your own, and I say this to you boldly at this moment because I wish to set it aside, so that in no way shall the possibility of it qualify what I wish to say to you, even though I am aware, as you must be, that in human affairs we must acknowledge with some humility that the claim to complete disinterestedness, if unduly stressed, must savour of pretence. I am content, however, to leave my observations to your moderate judgment when you have dwelt on their significance.

Professor Baker, in extending to me the invitation to speak to you, suggested that it would be most helpful if I would discuss the subject of collaboration between architects and engineers, and as in my own judgment this is a most vital subject, not only as between our two professions, but in its portent for the impending programme of nation-wide reconstruction, I propose to adopt this as the theme of my address.

This, I am aware, is a lecture addressed to you as undergraduates of this University whilst you are still engaged upon your studies, but I venture to ask you for a short while to stand with me at a point, as it were on some high parapet, above your day-to-day routine, from which a wider perspective than that of your immediate studies may be achieved, embracing the whole prospect of building activity in the years following the war, and the part which our professions may, side by side, be able to play. It is my good fortune to be speaking to you in this ancient seat of learning by which your profession, like my own, is most properly embraced, and I am, by that happy fact, excused from all those familiar and shameful apologies which in other settings it is conventional to offer for the advocacy of an outlook avowedly idealistic in character.

We look to this University as a place in which the many branches of specialised knowledge are pursued against a background of the widest general development, so that eventually, in following your chosen vocations, you may have recourse to those more universal values of the spirit which in the past have been the light and substance of our cultural inheritance, having power, if we resort to them, to invest our works with a significance such as will respond to the deepest sensibilities.

Your professors do not seek to produce mere scientists, chemists, engineers or architects, solely concerned to manipulate the principles propounded here towards narrow and sectional ends, but rather to send out men of those qualifications who shall in part be disposed and empowered to pursue their vocations as a responsible exploration of significant possibilities having the widest possible relevance to the total drama of human aspiration, effort and experience.

I address you, therefore, on the possibilities of the fullest collaboration between our two professions in the service of the tasks which we recognise to be lying ahead of us, and particularly in the light of the great responsibility which these tasks hold for us, not only that they shall be met in the spirit of the discharge of a great public service, meeting the living needs of our people, but also that we should seek out ways whereby our work of building, of whatever sort, shall be performed at a level which is consistent with the high traditions which have come down to us from the finest exponents of our crafts. Our problems are unique ; we face a situation which may be seen to impose a physical strain upon our joint resources, and to involve projects of a complexity unimagined in history. There is work for us all, but here we are at present concerned with the manner of our approach to it.

Owing to the tragic illiteracy of even the educated public in matters of building, there is little informed public demand for what the more enlightened feel vaguely in their inner reason should be brought about. Our stewardship is thereby heightened. We become the sponsors of the best instincts of our time, and although the ordinary man may not be equal to the formulation of his ideals, he will most certainly be our most searching judge.

I see from the lectures which have previously been given to you in these terms that the lecturers have in some cases pursued their speculations by scholarly analysis throughout the historical periods, but apart from limited inescapable references to certain aspects of building in the last century, my remarks to you will almost entirely bear on our present situation as I see it, particularly in the light of the demands which the immediate future may be expected to make upon us.

It is unnecessary for me to recount to you the course of building during the period of the Industrial Revolution, and how the unprecedented and unforeseen pressure of the new demands which that revolution made upon our predecessors in the early nineteenth century led to the chaos apparent in any of our northern industrial towns ; a chaos which we ourselves, presuming ourselves to be placed in their position, could doubtless not have avoided, and which we, though able to reflect upon their tasks in the light of our present knowledge, are scarcely entitled wholly to condemn.

The new manufacturers, facing boundless markets and the possibility of fabulous fortunes, were competing with one another in a race for production. The green fields of northern England were partly obliterated under a pall of smoke and grime, belching from the chimneys of Blake's "satanic mills," and the country stock of England was pouring into the grim rows of degrading hovels surrounding and serving these mills in response to vague ambitions—or were they tragic illusions?—confused with the glamour of city lights and other distractions. So were our principal industrial towns born, and with their birth the architectural grace of England temporarily receded.

It is for others to diagnose the case, why previously in England, building had been spontaneously rational in structure and beautiful to look upon, and why in this century reason and beauty so largely departed. For our purpose it is a fact that by nothing was the era more characterised than by the appalling irrationality and unattractiveness of the great mass of its building.

In building, as in some other of the principal activities, the period was characterised by a strange contrast of limited individual and outstanding genius, against a wide background of mediocrity.

You had your outstanding figures whose names will live against works of lasting significance, and in my own profession this was equally true, but the very extent of building was a sufficient cause in itself for its proceeding largely without reference to any kind of informed technical control.

Those who were responsible to build for the new order which was coming into being were quite conceivably overtaken and overwhelmed by the size and novelty of their task; they had no alternative but to build as they knew best, to meet the pressure of the demand for production, and the problems inherent in the new order emerged in the process when the mistakes had been made and the damage done. But we, I suggest, when our work comes to be judged, will be known to have had the benefit of the historical lesson behind us, and it will be seen, if we in turn fail, that we have failed with full knowledge of the consequences attendant upon our policies and actions.

The Divorce of Architecture and Engineering

I would like here to make a reference, as I believe some of my predecessors have not failed to do, to the gradual divorce or isolation of engineering from general architectural practice, commencing approximately with the Industrial Revolution and resulting from broadly similar causes, of which the principal may be the great advance in the application of pure science to industry which began to bear fruit at that time. Equally important was the extensive divorce of wide categories of building from any kind of control whatever, either engineering or architectural.

This unnatural divorce, as distinct from inevitable specialisation, between architecture and engineering, as well as between architecture and building generally, has, of course, been most pronounced in the industrial sphere. The sense has perhaps been dominant in the mind of the typical industrialist that any sort of shed would house his plant and that in accordance with the hardy independence of the northern school, it was in any case no one's business to interfere! When, however, this very attitude is seen to have brought into being the monstrous physical and social malformations which almost any modern industrial city presents, it becomes patently clear that it is actually everybody's business, as Blake, Ruskin, Morris, Shaftesbury and the others saw from the beginning. It is only in this century, goaded by the tardy rulings of the Factory Acts, that physical planning for industry has been called into question, and the possibility of a rational and humane approach introduced. Much could be said on this subject, and in modern Europe, there have been many fine and practical examples of a sane idealism in this field, whereby industry may be conducted in a physical setting of appropriate amenity, life-giving instead of life-destroying, not by the reluctant development of a few stretches of waste land as playing spaces, but by an original conception of factories as building organisms providing the working places of developed human personalities and complementary to their normal lives.

The Distinctive Fields of the two Professions

There has existed in the past, and I fear there still exists at the present time, an incredible confusion of thought in circles where understanding is important, as to the scope and operations which are distinctive to our two professions, and I think it would be to our mutual benefit if these were defined. Such definitions, which should also determine the scope of our two educational systems, would seem to be the more important in view of the growing complexity of modern building programmes and techniques, and the interweaving of structural, functional, planning and æsthetic requirements.

For some time past, men of your calling and of mine, have reflected upon the grim disorder of our physical environment, and have sought a clarification of its causes in the hope that policies which will relate to the findings of this diagnosis and such as will provide against similar consequences in the future, may be evolved. Such a clarification has actually been taking place continuously in modern building practice, and it is true to say that we have achieved some grasp of the trend of the evolution of an industrial society and of the character of the building required for its proper accommodation and development; but it would seem to be important, standing as we do to-day on the threshold of the virtual rebuilding of our cities during the next half century, that we should bring our diverse understandings together into a conscious outlook and policy towards building, and also so organise our maximum resources that we may ensure to succeeding generations, whose happiness and well-being our efforts will so profoundly affect, a home for their civilisation adapted to their physical and spiritual needs.

We should, I believe, from time to time, stand aside from the close, and in part inevitably self-interested association which we all hold with our professional organisations, and look disinterestedly at the work we shall be asked to do, because I believe that a detached acknowledgment will be demanded on both our parts of the contribution which we each are best fitted to make, more especially as we may most certainly expect to find our contributions onerous and taxing upon our energies.

Any attempt at an unqualified incursion by the architect into the sphere of specialised structural design, which is your province, and equally any attempt to absorb into the engineering curriculum a condensed study of æsthetics, would, in my judgment, lead to harmful encroachments in practice, damaging to our mutual prestige and to the general interests of building which we have in mind.

Engineers and Æsthetics

Several distinguished members of your profession have, however, discerned the dangers inherent in an isolation of your studies from those which might lead to an appreciation of the meaning and terms of architectural form, and there is a view now apparently receiving serious consideration, that an ability to exercise an architectural control of form within safe margins of economic structure may actually be acquired by the inclusion of certain branches of æsthetics in your curriculum. I imagine that this very series of lectures is partly intended to fulfil this role.

No one would acknowledge more freely than do I, that lectures given to you in the course of your scientific enquiries, opening up to you some indication of the terms of æsthetic judgment, cannot help but be enlightening as to the possible relations between structure and form, but on the other hand I am full of misgivings at any suggestion that by some magical addition of the subject of æsthetic significance in building to your general studies, you may be able to produce the tangible results which other men but hardly achieve when such subjects belong to their native aptitudes, developed by arduous and specialised pursuit. This would be a very harmful fallacy indeed.

Architectural Value

I think it would be helpful if I were to present to you certain values in building which are held by us, as architects, to be important, in order that you may possibly understand our point of view the better, and what we mean when we say that architecture is building with significance, and how it seems to us that integrities are involved when we see great works, such as harbours, bridges, roads and industrial projects, because of their demand for structural specialisation in their physical aspects, unwarrantably divorced from those general references, essentially architectural in character, with regard to which they would in the past most naturally have been conceived.

Structural resourcefulness by no means explains the full greatness of buildings in the past. The triple dome on pendentives, with its internal cone, was in itself a structural invention, but, as used by Wren at St. Paul's, it may also be seen to rise above the misty profiles of a London evening with the disturbing enchantment of a dream, and that, not as by an accident, but because, as I would suggest to you, Wren the architect knew of a more elusive and more exacting order of geometry and of measurement, than that which he found in his mathematics.

It is not that a similar intensity of expression should be sought in a range of furnaces or the sheds of a steel yard, but can we deny that there would be an immeasurable softening of the forbidding profiles of the familiar industrial scene if every occasion for order

and seemliness were seized with a true sense of æsthetic appropriateness?

I understand that other lecturers are to address you more particularly on the subject of æsthetics, and I have no desire to encroach on their field, but the nature of beauty lies very near to the heart of this theme.

Of course, if any one were disposed to raise the question "Why should I seek such values as you describe in structures?" no answer could be given. The issue is absolute. You either seek them or you do not, just as a man will be moved to seek or not to seek the music of Beethoven or the poetry of Keats. This is the order of the appeal of beauty in architecture.

It would clearly be possible for buildings, including churches and public halls and galleries, to be conceived in utilitarian terms. Worship is quite practicable if conducted in a shed, as due to the fallibility of human skill, it often virtually is. But it seems to be generally accepted, that where buildings of this sort are involved, this shall not be, and standards of seemliness, and even of beauty, are commonly sought. Where then shall this demand for beauty cease, since clearly the issues facing the masonarchitects of Chartres Cathedral differed quite considerably, in intensity at least, from those which present themselves to a modern architect concerned with the design of a laboratory, or an engineer with a tunnel?

The answer which I would offer for your judgment is that it does not, or should not, cease at any point of our labours. It is imperative throughout all creative effort, not merely as a responsibility, though it is most emphatically that, but as an inherent necessity, meeting the deepest instincts of our nature, which in the past urged our ancestors to carve their dreams upon the walls of their primitive caves and to fashion the handles of their tools and weapons in forms and patterns yielding delight. There should, of course, be kept in mind the essential qualification, that while beauty is everywhere imperative, it has nevertheless a variable and appropriate validity throughout the whole range of building structures in their different circumstances and functions.

With the introduction of iron and steel there was brought into being a new category of specialised structural invention beyond the scope of the empirical formulæ of the masonry architecture of the past, based on a scientific use of material, and tending to the maximum elimination of substance by the most effective disposition of such substance as is used, as in the formation of a rolled steel beam or the disposition of steel rods in concrete. This inventiveness began to meet the demands of the new period without a reiteration of the classical grammar of design belonging to the solutions of other periods, although this release has as yet only tardily been accepted. The early structural ironwork of the nineteenth century, for instance, was set about with classical pilasters, dancing cherubs and swags of fruit and similar emblems from the lore of pagan mythology.

Architectural Structure

Here, possibly, was to be seen one of the most characteristic fallacies at work, befogging the subject of the relation between architecture and engineering for a hundred years. It is partly operative, even at this date, and I myself recall an able engineer of the older school who supported my advocacy of an early collaboration with an architect on bridge design on the incredible grounds that "the extra cost and weight of steel due to the application of decorative rosettes and similar architectural fancies at the crossings of steel lattices should be allowed for at the outset"! I am aware that no engineer trained at this University would labour under this extreme misapprehension as to the architectural function, but allow me nevertheless to present it to you as an expression of an error which I desire most vigorously to combat.

What is it then, more precisely, that an architect means by beauty in building? Well, of course, it means many things, but I desire for my present purpose to draw your attention to one essential aspect of beauty which alone is indispensable and which I believe sufficiently counters the erroneous concepts typified in the opinion just cited. A true beauty in architecture is to be sought inherently in our structural conceptions, and not as a superficial decoration. It is an anatomical beauty which we seek, as in the human or animal body, in which the skeleton is found to support and to be justified by the organic dispositions, and in turn the over-laying muscular structure, and only finally the lovely modulations of the flesh, moving the poet and the painter to their dreams. This is exemplified in a Gothic Cathedral in which the structural form is beautiful in itself, before it is fashioned and refined and sculptured with a craftsman's delight, and it is this inherent form which holds the richly diverse themes within a pattern of satisfying architectural unity and equilibrium, as in a symphony.

What then becomes of the theory of "bringing in an architect," like a costumier, to doll up structures already conceived on utilitarian structural lines? This is, of course, a parody on the true principle of architectural design as may be seen again in the Gothic Cathedral which is beautiful through and through, so that were it possible to cut it wilfully and at randon in sections and in all directions, it would continue to throw up harmonious forms, complete in their structural integrity.

Let me press still further as to the precise nature of this beauty that must be sought in the very anatomy of building and not in decorative trimmings. Quite simply, gentlemen, it lies in the mystery of proportion, in the relation of one part to another, the effects of which on our minds are inexplicable but indisputable: they are verified as a fact of our experience and are equally valid in architecture and music, in poetry or painting. Plato, at one time, as you will doubtless have read, appeared to think it had to do with a memory rooted in the soul of man which harmonious proportions have the power to evoke in us. Be that as it may: such metaphysical speculations lie beyond our present enquiries. What may safely be said of it is that it is not to be found in textbooks and cannot be taught in codes, and yet this rule of proportion applies in every degree of complexity from the simple and obvious relations between length, breadth and height in building, to that between windows and solids; between plane and mass, between one texture and another, the patterning in an enrichment or the contrasting of colour. Proportion is the very datum of the beauty which we seek.

Architectural Relationships

Next to beauty of form achieved by fineness of relationships between part and part, there is the beauty of material finishes, as distinct from their suitability to purpose. Here again, is a province of æsthetic sensitiveness. An examination of the buildings of the historical periods reveals that the most fastidiously informed judgments governed the choice of materials for their texture, their colour, their behaviour under exposure and their adaptability to craftsmanship.

Unfortunately at present in this country all considerations of material finishes are overweighed by the deadly pall of disintegrating smoke which camouflages our façades in a sooty gloom. The question of smoke abatement is not, however, a dying but a living cause, and it is to be thought possible that even yet our cities may be enlivened by a fuller recourse to the varied material finishes which are actually open to us. In public engineering works, therefore, the choice of materials becomes an æsthetic responsibility, equal to that in buildings of a directly architectural character, and even the structural frame may require to be visualised in relation to its eventual surface finishing. An instance of this is seen in a bridgehead or bridge crossing a public highway, where we should look to see some attempt at the introduction of an architectural expression sympathetic to the surroundings. It is, as you will agree, perfectly feasible for engineering works, either in the town or in the country, to weld harmoniously into their landscapes and not stab into them as alien things with violence, or sprawl stridently across them in a blatant disregard. The principles of town and country planning are here involved.

In the classical periods in the past, when by some accident or dispensation, these facts were consciously or subconsciously appreciated, quite simple unadorned buildings, cottages and farms and country churches and chapels, were built spontaneously, so

as to give the delight which proportion can yield, in which lines, planes, voids, masses and materials all played against each other in satisfying and delightful relationships, making a kind of music in their perfect equilibrium. But in the nineteenth century, this general competence or sensitiveness was largely lost, and colour, mass, voids, lines, planes and materials were then jumbled together in every kind of *gauche* incongruity. In the absence of engineering or architectural direction, harshness, blatancy and assertiveness prevailed on every hand. A plague of vulgarity and architectural illiteracy descended upon the land, within which the rare works of the masters stood as in judgment.

Is there any indication of a modification from this decadence to be seen in the present period? Yes, I believe there is in several ways a renewed recognition of essential beauty in structural form and in proportion. Some modern architects, in fact, in their search for structural and æsthetic integrity and in their attempt to purify architectural form, have abandoned all but a functional expression, but this form of asceticism can only be a temporary phase.

Æsthetic Choice in Engineering Works

Now in what way may this principle of inherent beauty of form and disposition be seen to bear on structures commonly regarded as of an exclusively engineering character, such as bridges and industrial installations of various kinds, as distinct from buildings more definitely architectural in character? I have been grateful for opportunities of examining the procedure adopted by members of your calling in the examination of alternative types of construction such as, for instance, the possible types of span in relation to the limiting conditions in the design of a bridge. Apparently, there are often quite considerable margins of æsthetic choice in such cases, to use the apt phrase of one of your lecturers on this subject, and in all sorts of ways the beauty which comes from harmonious proportions and relationships may be found to be perfectly feasible within safe and economic margins surrounding the diagram of forces. I do not see why this should not be found to be very generally true throughout all engineering design. Among types considered in the process of selection, there have been of course some instances of sound structural solutions completely devoid of æsthetic quality. If no standard of æsthetic judgment is introduced in such cases, a clear opportunity for a design of considerable beauty and dignity may easily be lost and a commonplace erection adopted.

This sufficient margin of æsthetic choice would appear to be present in innumerable obvious instances, as in the case of such structures as cooling towers, where the profiles are reminiscent of the forms encountered in the shafts of the Greek Doric order, only more pronounced and reversed. In certain instances, the pylons used by the Central Electricity Board have satisfactory forms, even though the whole principle of overhead wiring across the countryside is in question. These cases are merely referred to as incidental illustrations of the possible scope of a broad principle in practice.

Planning in Particular and General

There is a further subject upon which the architect's vocational training has a very direct bearing in regard to our functions. I refer to planning in particular and in general. It will be agreed, to give an elementary description, that apart from its determining influence on form, planning in building consists of such an assemblage of the diverse parts of any system of requirements as will lead to the efficient and economic disposition of those parts, having regard to their purpose. In architecture, planning has this functional aspect, combined with further qualifications pronounced in contemporary practice. There has entered into our common vocabulary the hackneyed expression " Design for Living," and I would say that one of the architect's aptitudes growing out of his training and special interests is to have a marked sensitiveness to the conditions supporting living and to sociological issues and developments. Planning, to an architect, is a vastly complex synthesis of humanistic, functional, structural and æsthetic elements, all bearing upon and influencing each other and demanding a proper fusion into a working entity embracing all factors in their proportionate significance. This leads me to suggest to you that where works of an otherwise typical engineering character involve planning, and especially where factors of the diverse range which has here been indicated are involved, it would seem normal that an architect's knowledge and experience should be introduced. This is a relevant topic at the present time in view of the great demand for town planning in the immediate future, within which great engineering undertakings are bound to be involved.

Engineering works will call for the most skilful dispositioning in consideration of amenity, if the projected policy of the dispersal of industry becomes a reality.

The Architect's Outlook

It seems to me that we shall be helped in our considerations if I endeavour to refresh you upon the nature of an architect's training, outlook and aptitudes, and though I would not in this place venture to reveal to you your own, it may not be presumptuous of me to enter upon some description of how it seems to us that you differ. Perhaps we shall even find that it has not after all been necessary, in the course of the development of our several activities, for us to feel the sense of mutual encroachment or of competitive interests. When our separate and joint territories are seen in their true perspective we may, like landowners, each look across our local country and be interested in the sight of our neighbour at work, and equally happily invite him over to give us the benefit of his specialised knowledge and experience, and *vice versa*, conscious that in so doing our individual possessions are benefited and the country in general greatly profited.

I offer here the simple but most emphatic statement that I cannot conceive of any responsible and experienced architect claiming such a knowledge of the inner consistencies of the subjects which are the basis of your practice, that he could, for instance, determine the elaborate dispositions of structural elements which make up a bridge, or other structures of that order. But on the other hand, neither would I in any sense feel it to be derogatory to your prestige for an architect to hold the opinion that, by your very choice of your calling, you have shown where your dominant interests and aptitudes are held by you to lie, and that you thereby at the same time show that the territories of knowledge, of feeling and of judgment, which, as I see them, are the architect's peculiar province, have not seemed to you to be your natural field.

In rare instances in history, as indeed in the modern period, we have records of exceptional minds such as those of Leonardo da Vinci and Christopher Wren, to choose only two examples from that period of intellectual vigour and resource, which have been equal to working consistently and creatively in contrasting fields of knowledge, in the sciences and the arts, but we cannot base our views and expectations upon these exceptional men. I believe it to be an accepted truism that the æsthetic and mathematical fields of thought are not commonly open to the same mentalities, and that though both are concerned with measurement, the bases of those measurements involve quite different tracts of the human psychology. It may be that certain men of ability might study the general aspects of both subjects up to the point of a moderate competence—there would not be time for more—but the successful architect or engineer is likely in each case, provided he has chosen his career aright, to be one whose whole disposition has by his very nature been directed towards one or other of these subject groups, so that he has been free to maintain a single-minded concentration upon those studies and enquiries which lie beyond the familiar generalities in profounder categories such as only a single devotion will discover and elucidate.

We may recall, too, the comparative simplicity of building technique in those days which gave a man like Wren the opportunity to develop his contrasting interests, combined also with that other most important factor, that in his day there were schools of craftsmen versed in the prevailing architectural idioms, brilliantly competent to contribute their own knowledge and skill within the given form of a building. Wren, for instance, could show his

sketches to Grinling Gibbons, who would take up the design of a carved frieze or screen from Wren's brief indications with sympathy and originality.

Consequent on the materialistic approach of the last hundred years, and the gradual elimination of personal and original craftsmanship under the influence of mechanical mass organisation, the architect to-day has to design and control every single architectural element of his schemes and follow that control through to the final execution.

Professor Inglis once gave to us over the wireless an imaginative picture of the true type of engineer, performing his tasks with such knowledge as he has acquired and such qualities of character as he may possess, often in the face of the untamed forces of Nature arraigned against their fulfilment.

I need not, and indeed cannot, flatter you in the scope of your undertakings, but I believe that my own profession may also, in its own sphere, claim its own glories. It is not our part to fling a bridge across a canyon, but the men of our past to whom we look as our masters, have, in another sphere, perhaps I may say of the spirit, fought their battles and dreamed their dreams to the point of placing upon the earth works enduring through the centuries and exerting an influence, elusive yet tangible in experience, under which the generations, standing before the towers of a Chartres or the dome of a St. Peter's, have felt in their presence a sense of communication invoking the deepest sources of their being, to the point of a profounder comprehension of the universe and of man's power and delight in living within it.

The Architect's and Engineer's Training

Turning to the subject of engineering training, the basis of this, apart from its desirable cultural background, is scientific in character, such as will enable you to visualise the physical circumstances of the works entrusted to you and to design, execute and administer such works in the light of the standards of structural and functional efficiency and economy which are your aim and your peculiar province. Yours is the ideal of achieving such a specialised familiarity with the physical laws governing construction, that you can explore the possible utilisations of those laws in their largest and most subtle applications, until no mountain may be too great for you to tunnel and no chasm too wide for you to span.

An architect, in his training, has in every possible way the great æsthetic achievements of the past brought before his understanding in order that his appreciation of the elusive properties of form, of which I have spoken, may be quickened. Where you, gentlemen, to use too easy a generalisation, may be said more particularly to seek truth, believing beauty to be also desirable, we might be said in an equally inadequate generalisation to seek beauty believing that it should be based upon truth. I cannot, however, leave you with these generalisations without turning to the more precise distinctions which must be acknowledged, since beauty alone is not, as you well know, the sole end of an architect's preoccupations. As I see it, we, as architects, are trained to visualise, to plan and to build for the living and working demands of the sociological order which exists in any given period in terms of structural rationality, functional efficiency and amenity and æsthetic form, co-ordinating such consultant technical advice as may be involved in the widest possible relevance within the general conception. The architect is not a specialist seeing one part of the whole ; he is trained for a master co-ordination of the detailed specialised knowledge involved in a complete building project. He must, of course, know enough of these specialised subjects to ensure that his original conceptions are rational and that they will stand the test of technical development.

Having now completed my general review of some of the principal factors which I believe make up the background of our subject, let us attempt a broad and, I hope, liberal, statement of the general character of collaboration between our two professions, such as would seem to be logically deduced from the premises which we have examined.

Any appearance of an over simplification of a subject of this magnitude must inevitably be suspect, and I do not desire to engage in such. Nevertheless, I venture to offer the following system for the grading of our relationships for purposes of discussion, such as may cover the scope of our possible collaboration and independent practice in salient terms. This sub-division is put forward as a signpost pointing in a hopeful direction. Collaboration in the future, if it is to be of value, will not rest upon hard political bargaining as between two competitive schools of practice. Such an arrangement would scarcely merit the name and would be powerless to produce any worthy result. Collaboration will most naturally come into being in all sorts of unplanned ways, if it is genuinely sought, by voluntary association for general and particular purposes, and by regular examinations of our common aims and difficulties together. The point of this address is lost to you if I have not conveyed the sense of our common motive and aim.

It has been virtually agreed in what has gone before that, using the term architecture in its original and most catholic intent, all structural works of whatever nature and purpose, and of whatever degree of structural complexity or simplicity, where they constitute an element of environment or a visible part of the living scene, demand a formulation as architecture in its three orders of function, structure and form, these being the traditional qualifications of convenience, stability and delight, and it is surely to achieve a proper harmony and true integration of these that collaboration is seen to be desirable and is now being sought.

Conclusion

I believe it to be possible to see three main relationships between architecture and engineering, using the term architecture now in its specialised sense, approximately as follows :

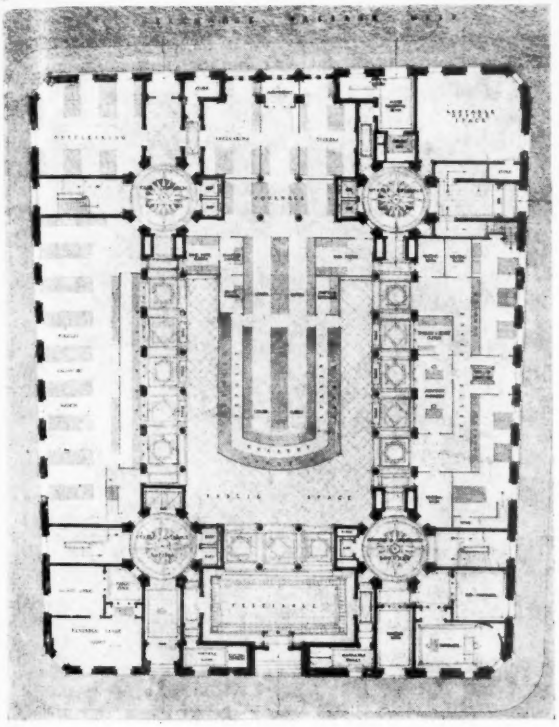
1. Works having an architectural dominance.
2. Works in which architecture and engineering values are interwoven.
3. Works having an engineering dominance.

The category of works having an architectural dominance includes buildings of a commercial, domestic, administrative, religious, scholastic and public service character, in which structural issues and mechanical services are subsidiary to humanist considerations. The architect's relation to buildings such as these hardly requires description. It will be natural, as is elsewhere described, for him to co-ordinate the various classes of engineering advice which he will invite for such buildings when his general schemes have been evolved in terms capable of technical solution.

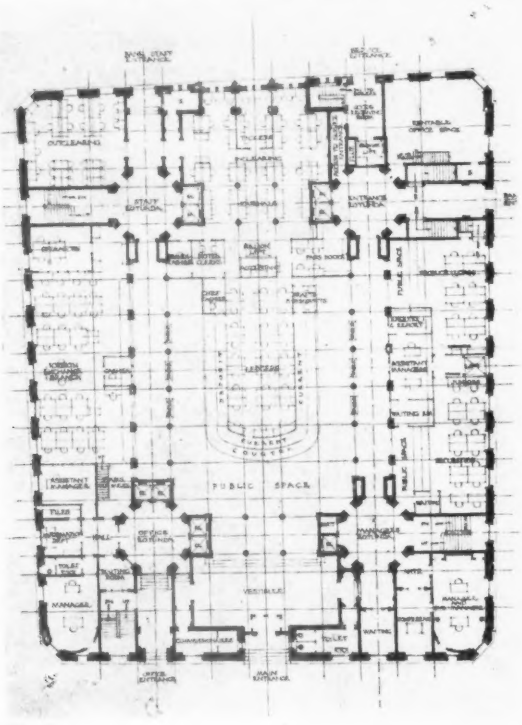
It seems very logical to claim that such co-ordination of the many technical services to which the architect has to resort in the evolution of his schemes belongs to the author of the original conception to whom the inter-relevance of its many parts is most naturally apparent and has, in fact, determined the design. Smaller building works, unless of exceptional technicality, may, of course, lie completely within an architect's scope.

In the middle category of works in which engineering and architectural considerations are interwoven, I have in mind the general class of industrial and public utility buildings which, because of their extent and growing prominence in the modern environment, seem to demand that the many engineering issues familiar to this class of building should be integrated with reference to architectural values of a proper validity. By a difference in assembly an architectural or non-architectural result may be achieved. Reference to this question of validity is important in the light of practices belonging to early attempts at industrial æsthetics, in which an appropriate relevance of architectural values was imperfectly realised, and many anomalies were produced as a result.

Modern industrial projects will be more and more permeated by humanistic and non-mechanical considerations, and as all such matters are the day-to-day subjects of a modern architectural practice, collaboration between the engineer and the architect from the inception would be ideal.



Plan 1



Plan 2

WORKS HAVING AN ARCHITECTURAL DOMINANCE

Martins Bank

Plan 1 on the left illustrates a building designed to contain the headquarters of a Bank and offices for rentable purposes. It shows the architect's solution, prepared as usual in the first instance without the help of other technicians who later would be invited to assist in the detailed working out of the services and the structural elements. It will be observed that steel dispositions, positions of ducts, lifts, heating flues, etc., in addition to the usual planning requirements, have received due consideration and have all been allowed for from the outset.

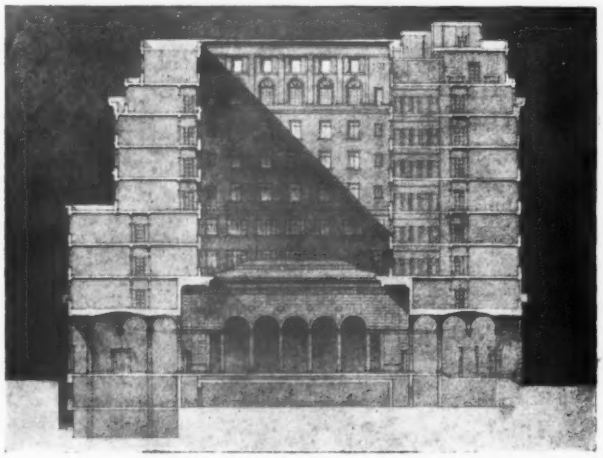
Plan 2 illustrates the building as actually carried out after full consideration had been given by Consultants to the details of the structure and services. It will be observed that the steel dispositions remain as designed, and lifts, service ducts, flues, etc., remain as originally conceived.

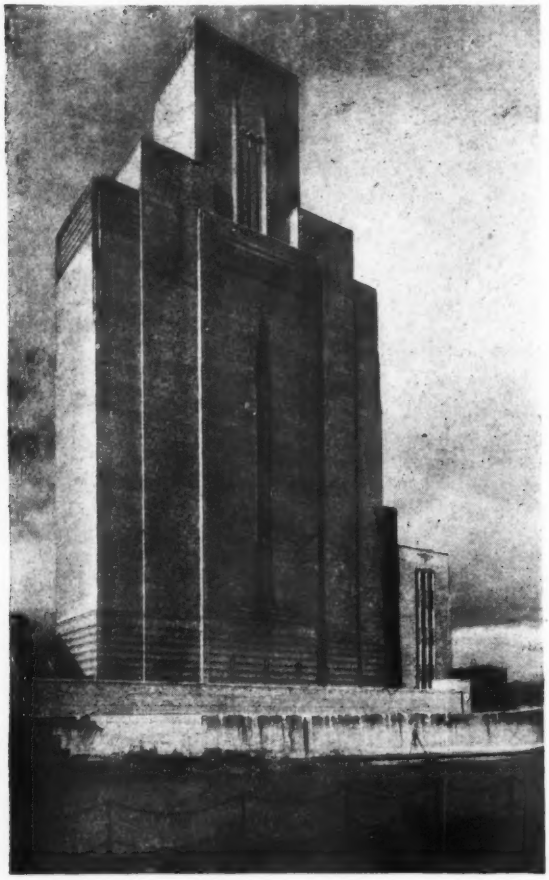
The section, prepared in conjunction with plan 1, illustrates allowances for the cantilever construction over the main hall, the cantilever proposals having been broadly designed to take the load of the full height of the Lighting Court walls. Here again the structural requirements are shown to have been visualised from the earliest stages of the general planning.

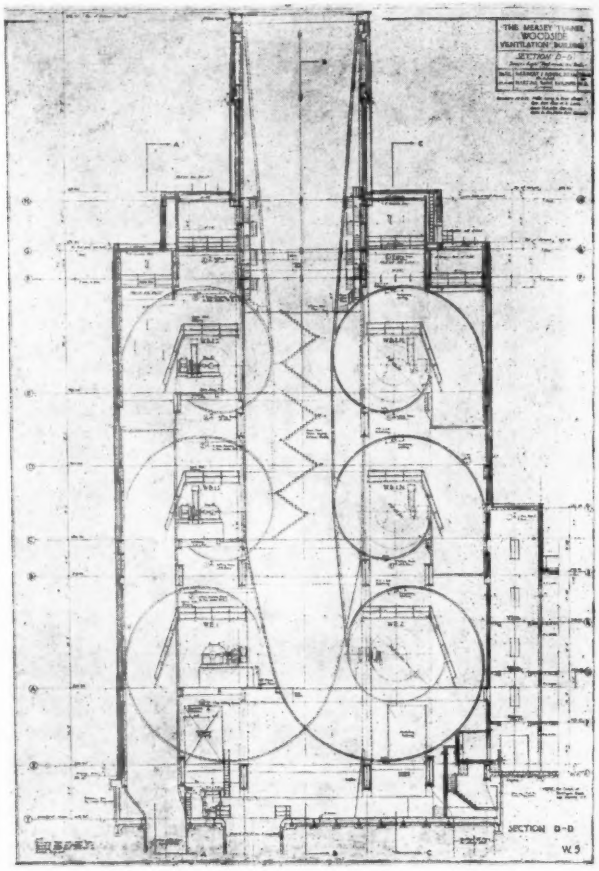
Conclusion of Text of Article

In the third category, that of works having an engineering dominance, I suggest with great earnestness, and I hope professional detachment, that even in your greatest works, predominantly governed by your scientific resources and by purely engineering considerations, in so far as they again must appear within some form of living environment, when they are not works of a foundational character, it would seem proper that the visual form of such works should be submitted for the critical collaboration of a competent architect at the fluid stages of the designing. In this way he may advise, with due acknowledgment of the limitation of his scope, upon such a dispositioning of the variable elements of the design within the known principles of harmonious proportion and the margins of æsthetic choice as will invest the work with those qualities of appearance which I believe your masters to have in their minds when they suggest that you should engage in the study of æsthetic considerations.

This principle of a scheme thought out by the architect at its original stage in relation to its broad structural and other technical requirements applied generally throughout this building, and I do not see why it should not apply in every case in buildings of this character in which the architect-author is most naturally the master co-ordinator of the varied consultant advice.







WORKS IN WHICH ARCHITECTURE AND ENGINEERING VALUES ARE INTERWOVEN

Woodside Ventilation Building

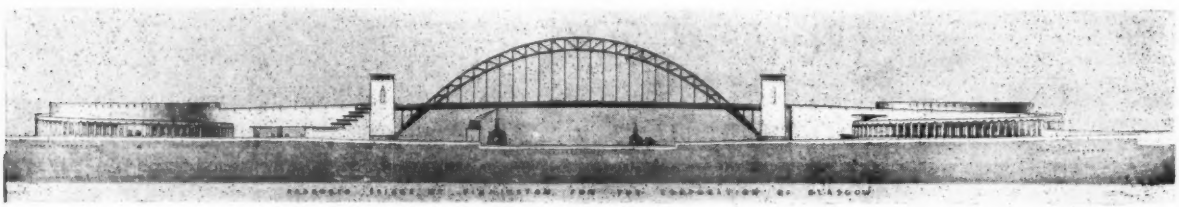
One of the Ventilation Stations for the Mersey Tunnel, a work in which architectural and engineering considerations interweave. The site was prominent on the river front but restricted in area and elongated in form. From the point of view of mechanical assembly, several dispositions of the fans and their chambers were possible, but these were eventually assembled with complete working efficiency in a harmony of form and mass, the properties of the third dimension being constantly held in mind.

WORKS HAVING AN ENGINEERING DOMINANCE

Finnieston Bridge

A bridge and approaches illustrating the welding of a large engineering project into the environs of a city involving town planning and traffic considerations. The regular spiral approaches provide for an uninterrupted flow of traffic and their structural forms allow for the economic utilisation of the areas covered.

The elevation illustrates the total conception as planned. Sufficient research was undertaken in general terms to ensure that such a span could be bridged by an engineer within the limits shown on the drawings. The traffic approaches are organised to meet the functional requirement economically and at the same time to contribute to the formal appearance of the scheme as a whole.



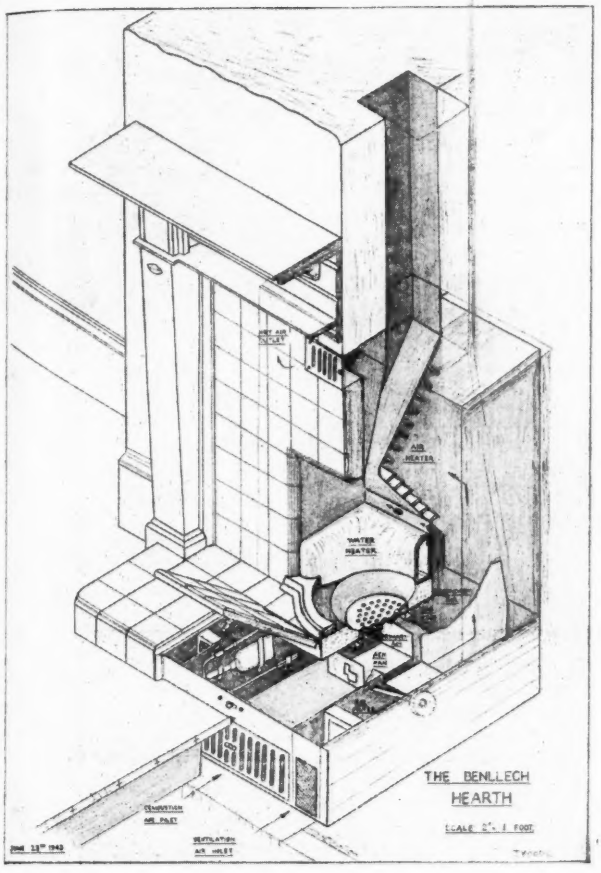
Open Grate Efficiency

and Domestic Heating and Ventilation

THE BENLLECH HEARTH

By

JOHN S. AUCKLAND YOUNG,
R.E., B.A.(Hons.)Architecture [A].



In rooms where the heating is effected by an open fire-grate the efficiency of the heating system is determined by the correct displacement of the air in the room since the maintenance of an even temperature is dependent on air movement. When the subject is approached from this point of view a new set of conditions are apparent and new methods, or the possible development of previous experiments, are seen from a new angle.

The make up of room air is usually from leakage under doors or through the openings between the skirting and floor boards, while the air for combustion and the chimney suction are the exhausting mediums causing a stratum of cold external air across the lower portion of the room. Heating by convect or radiant heat gives a movement of hot air between the centre and upper portions, but this hot air has no inducement to disturb the cold lower stratum.

Thus it follows that if the air for combustion is supplied independent of the room air and hot ventilating air is fed to the room the cold stratum will not exist, the hot air will cause an even flow round the room and the manometric pressure in the room will tend to be positive.

The tendency for a positive pressure and the provision of an external supply of combustion and ventilating air gives conditions that allow for many advantages, such as :

The elimination of cold spots or draughts.
Combustion of hard coals or coke with smokeless chimneys.
Reduction of the tendency for down draught.
Conditioning of the inlet air.
Easy ignition by the ideal position of a gas ring.
Complete fuel consumption to fine ash and simple removal by an ash pan below the grate.
Ventilation of space below floor boards and prevention of dry-rot.
The fitting of an efficient and accessible water heater.

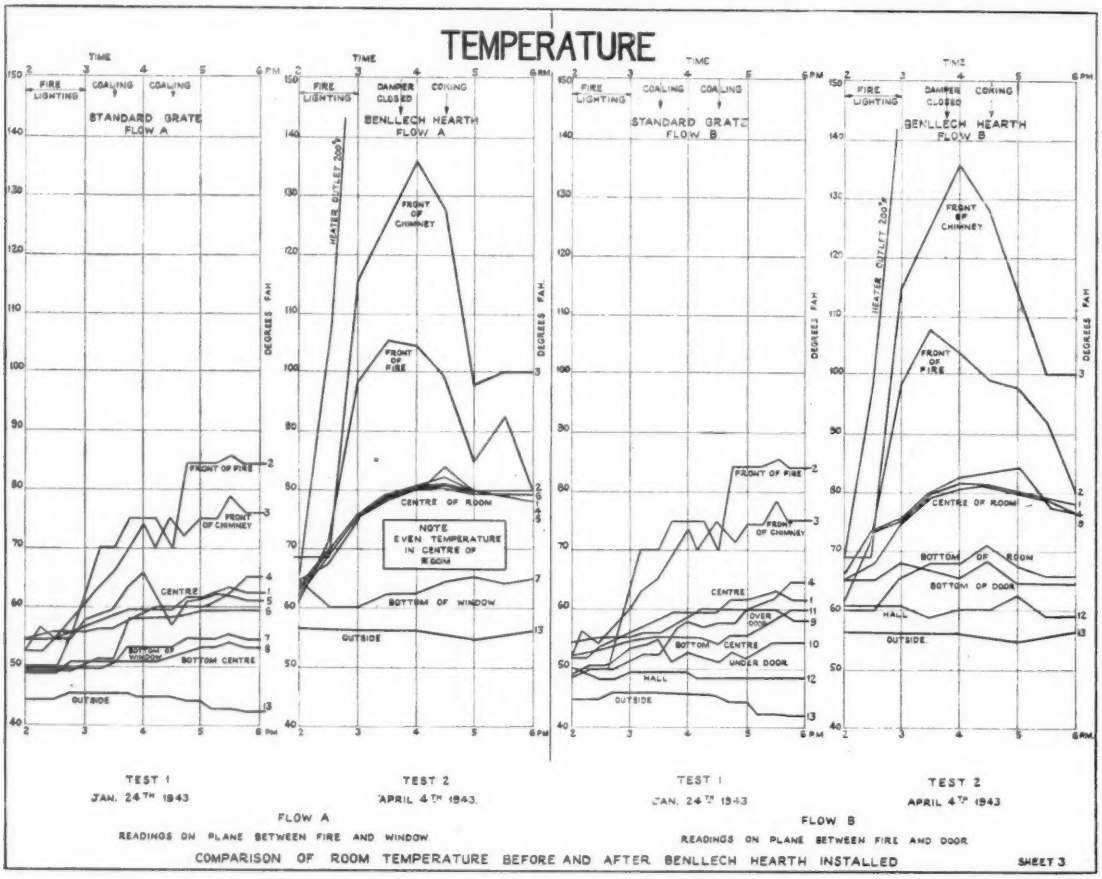
The Benllech Hearth is a grate designed to use air for combustion and ventilation from below the floor boards with an air heater calculated to cause an incoming flow of hot air sufficient to change the room air 2½ times per hour. This is achieved by arranging webs on the rear and sides to give the required heating surface.

The grate consists of a metal structure fitted into a two-feet wide opening 12 inches below the hearth and 14 inches into the chimney breast. The base consists of 3 inlet chambers constructed by fitting a metal box in the centre of the concrete opening with a hinged and balanced tile tray on top secured by a spring catch.

The centre chamber is the combustion air inlet leading to the underside and rear of the fire bed with a damper at the inlet controlled from the front of the hearth. This chamber contains a loose ash pan under the grate, racks for the fire tools and the gas ring and piping with the gas control valve. The combustion air, in addition to supplying primary air below the fuel bed, supplies secondary air through a duct at the rear of the fire to openings at a fixed height above the fuel bed. The two outer chambers are the ventilating air inlets leading to the air heaters, and have each a removable air filter of the shredded glass or sponge rubber type. These chambers also house the balance weights for the tile tray. The ventilating air passes through the heaters at the sides and rear of the fire to a space round the base of the chimney and is discharged into the room through a bronze damper in the tiled face of the fireplace.

The fire base consists of a special cast-iron grid of round to square openings to allow the ash to drop through easily and to give sufficient air to burn coke or smokeless coal ; a gas ignition and reviving ring is fitted below with the gas jets ¼ inch clear of the openings. The secondary air inlets are designed to pass the necessary extra air required for complete combustion at the correct position for burning the free carbon, and to partially cool the rear of the fire, preserving the life of the metal.

A cast-iron water heater may replace the upper portion of the fire brick lining in which position it presents a large heating surface to the lower part of the fire bed ; it is constructed to the shape of the fire, and has a removable plate in the back for cleaning. The connecting pipes are situated in the ventilating air chamber, where, with the lower tiles made removable, the joints are easily accessible, allowing the heater to be disconnected and removed for repairs or cleaning. At the rear and sides of the heater, sheets of asbestos lagging are fitted as a heat insulator.



The only extra requirement of the Benllech Hearth affecting the appearance of a standard fireplace of any design is the tiled tray in the hearth proper and the heater air outlet, both of which can be fitted into the architecture of the fire surround.

Comparative Tests

The diagrams indicate the temperature and draught observations before and after fitting the Benllech Hearth, and the following comments indicate the advantages gained :

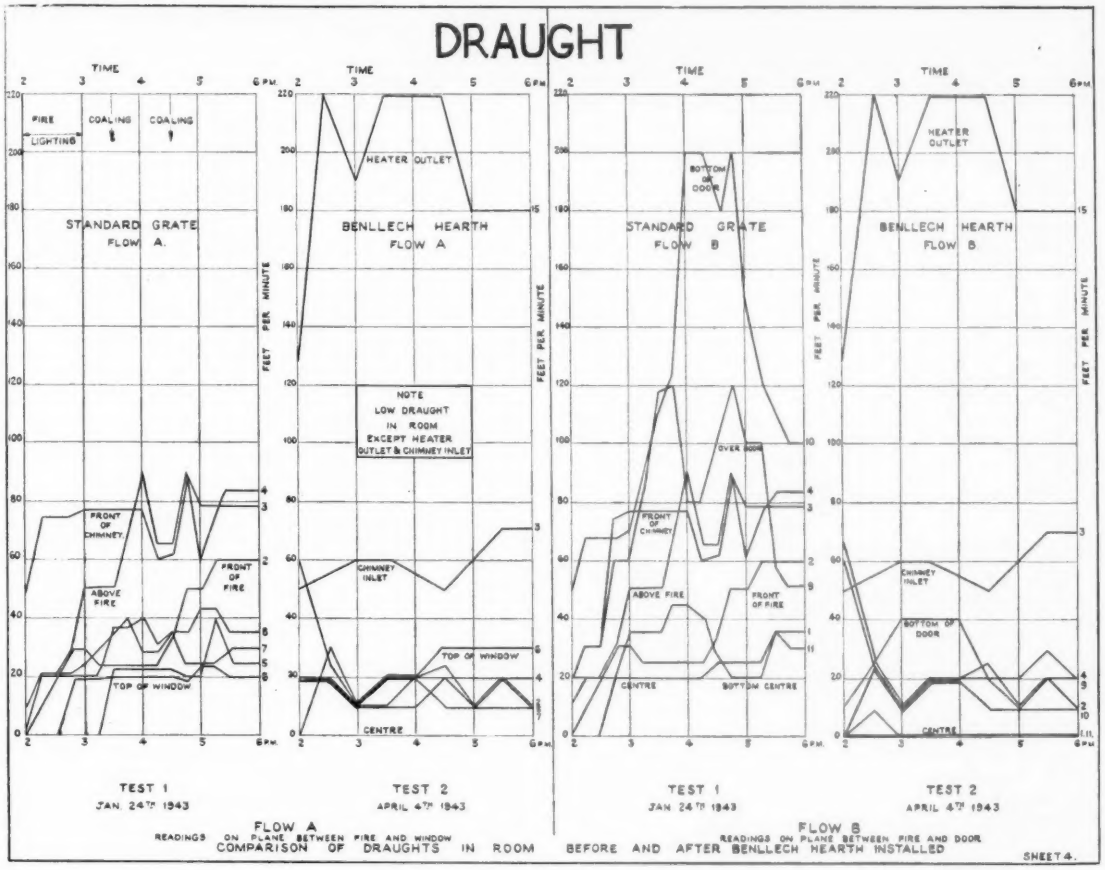
1. *Pressure difference between the room and outside air.*—Draught under the door reduced from 120 to 25 feet/min. and when in Test No. 2, the outgoing draught over the door was stopped, the draught under the door disappeared.
2. *Pressure difference in the room* reduced the draught from 40 to 15 feet/min. (Note—discomfort 20 to 30 feet/min.)
3. *Temperature difference* round and about the centre of the room reduced from 12 deg. F. to 6 deg. F., old grate 53 deg. F. to 65 deg. F., new grate 78 deg. F. to 84 deg. F. The temperature during the new grate test was raised to 84 deg. F. to compensate for the 15 deg. F. difference in atmospheric temperature between the two dates of the tests.
4. *Burning of Coke* was successfully accomplished with the new grate.
5. *Clean Filtered Air* from the heater was particularly noticeable. The filters in the air inlet ducts operated successfully, as even without the fire the flow of air through the filter was 40 feet/min. caused by the normal heat of the house and the difference in the levels of the air inlet and outlet. This should be a considerable advantage in preserving the furniture and decorations.
6. *Even flow of air in the room* was over the whole of the air space, and no cold pockets of air existed. The rate of change was two and a half times per hour of the total air in the room.
7. *Ventilation of space* below floor boards from the flow of air to the fire and heater removed all musty odours and effectively eliminated the conditions that produce dry-rot.
8. *Complete combustion from secondary air* was at once apparent when the smoke ignited, the air openings appeared like " cat's eyes " in the flame due to the vortex formed by the incoming air, causing the air stream to penetrate into the smoke mass and ignite the free carbon.

In general the Benllech Hearth acts exactly in accordance with the design expectations.

Conclusion

While the description shows a method of improving the domestic grate as a heating and ventilating apparatus, retaining generally the same appearance and arrangements as the existing grates, it is recognised that more revolutionary improvements could still further improve the efficiency, also that the principles can be applied to any radiator such as a gas or electric fire. Designs have, therefore, been prepared on these lines, but space does not allow us to deal with them in this article.

The principles of the Benllech Hearth can be introduced to any type of building where a circulation of hot air from the upper portion of the building and exhausting from the lower portion will give a more correct heating and air conditioning system, This principle will operate only when heating is required, and when cooling is necessary some arrangement of exhausting from the top of the room must be available. With a central heat supply the hot air in any case will rise to the top of the building, therefore this portion should be made air tight and a circulation encouraged from it to the lower portions. The hot air inlets can be at the top and a system where these hot air inlets can become outlets by an arrangement of dampers is possible.



Correspondence

SWISS TERRACE HOUSING

25 West End Avenue,
Pinner.
15.12.43.

To the Editor, JOURNAL R.I.B.A.

SIR,—I was very glad to see in the November number of the JOURNAL a translation of the article in *Werk* on the terrace houses at Zürich. The original note I had seen ; and from it I had made notes and sketches because it seems to me that much is to be learned from this interesting experiment. I am glad you have set it before architects in this country. The simplicity of planning, making way for simplicity in construction, and the use of prefabricated units, are features which might well be adapted to British requirements. The separation of rooms by continuous batteries of cupboards and the use of thermal insulation might also be imitated with advantage in our smaller houses of the future.

There is one element in the whole scheme to which I should particularly like to draw attention. That is the system of *heating*. In the whole of the house there is only one flue—a plain vertical shaft. All the rooms are warmed from one central stove on the convection principle, and apparently the authors of the scheme are satisfied that this one stove will supply sufficient warmth, as no subsidiary heating seems to be provided. The stove is situated—not as the note in the JOURNAL says, in the basement, but at ground-floor level. The efficiency must be such as is never attained by heating appliances in our houses, as the only heat loss is the very small amount of heat which escapes at the top of the chimney. All the rest of the heat generated by the consumption of the fuel is retained in the house in some way or another. The stove is apparently a metal enclosed stove with fins to increase the heating surface ; and the long length of metal flue is also used to warm the air. I knew well one house in Switzerland where the same system was adopted. It was a considerably larger building than the one illustrated, but although fireplaces existed in the dining-room and drawing-room, in addition to the central stove, I do not remember ever seeing the fireplaces used. The central stove was adequate for the comfort conditions required. If a system of this kind could be made popular in this country to give at least what has been called " background " heating, great economies, not only in fuel consumption but in building costs, could be effected. If a concession must be made to British prejudice, a source of radiant heat could be provided in the living room ; whether in the form of an open solid fuel fire, a gas fire or electric fire, could be left to the choice of the occupant. I do hope that this important feature in house design will be considered with an open mind by those responsible for housing schemes in the near future, especially as the planning of the whole building is closely connected with the system of heating which is selected.

The note in the JOURNAL states that the water-heating boiler for the bath and kitchen is in the basement. This is not actually

stated in the German original. It may be correct, but I rather gather from the fact that a large cylinder is shown in the bathroom that an electric heat storage system provides the water for bath and kitchen ; and that the appliance in the laundry is only used for laundry purposes.

Yours sincerely,
JOHN H. MARKHAM [*F.*].

Notes

FORTHCOMING A.S.B. LECTURES

Members are reminded that the Architectural Science Board is continuing its series of Lectures on new scientific development in building of interest to Architects and has now arranged the following :

Saturday, February 5, 1944, at 2.15 p.m. & 4.30 p.m.

1. *New developments in the design of Structural Timber.* Mr. P. O. Reece, A.M.Inst.C.E., A.M.Inst.M. & Cy.E.
2. *New developments in the design of welded frames.* By Mr. Ramsay Moon, B.A., M.I.Struct.E., M.I.W.

Saturday, February 12, 1944, at 2.15 p.m. & 4.30 p.m.

1. *New developments in the design of Concrete Formwork.* Mr. C. Parry, D.F.C., M.I.Struct.E.
2. *The influence of new developments in construction on Architectural design.* Mr. M. Hartland Thomas, M.A. [*F.*].

SCALE OF ARCHITECTS' CHARGES FOR LOCAL AUTHORITIES' AND PUBLIC UTILITY SOCIETIES' HOUSING WORK

The Practice Committee are at present considering the revision of the Scale of Architects' Charges for Local Authorities' and Public Utility Societies' Housing Work to make it applicable for post-war use.

In the meantime the Council, on the recommendation of the Committee, have formally withdrawn the scale published in the 1939-1940 Kalendar.

MR. HAYNES RETURNS TO THE BOARD

As from 1 January 1944 Mr. Everard Haynes has resumed his appointment as Secretary to the R.I.B.A. Board of Architectural Education, having been specially released for this purpose from his duties as a Lieut.-Colonel on the Staff of the War Office.

A.B.S. HALF-CROWN CHRISTMAS FUND

The Presidents' special Christmas appeal on behalf of the Architects' Benevolent Society has, up to date, resulted in donations amounting to £841 15s. 6d. (6,734 half crowns).

THE CODE OF PROFESSIONAL PRACTICE

The last paragraph of Clause 3 (*d*) of the Code of Professional Practice at present reads as follows :

> " Auctioning and House and Estate Agency are inconsistent with and must not form part of the practice of an architect."

On the recommendation of the Practice Committee the Council have amended this paragraph to read as follows :

> " Auctioning and House Estate Agency are inconsistent with and must not form part of the practice of an Architect. An Architect must not be a member of or have any interest in a firm of Auctioneers and/or House and Estate Agents or have any permanent working arrangement or partnership with any person who practises as an Auctioneer and/or House and Estate Agent or who is a member of any body of Auctioneers and/or House and Estate Agents. He may, however, be employed as an architectural consultant, adviser or assistant if paid by fee or salary."

The amended paragraph will be incorporated in the Code and printed in the next issue of the Kalendar.

A.R.C.U.K. DISCIPLINARY REGULATIONS

The following notice was published in the *London Gazette* of Tuesday, 28 December 1943 :

Privy Council Office, 28th December, 1943.

ARCHITECTS (REGISTRATION) ACT, 1931

Regulations made by the Architects Registration Council of the United Kingdom under Section 13 of the above-mentioned Act have been submitted for the approval of the Privy Council and are published herewith.

Representations by persons to whom the Regulations are applicable may be made in writing to the Privy Council Office on or before the 14th day of January, 1944.

ARCHITECTS REGISTRATION COUNCIL OF THE UNITED KINGDOM.
DISCIPLINARY REGULATIONS.

REGULATIONS MADE IN PURSUANCE OF SECTION 13 OF THE ARCHITECTS (REGISTRATION) ACT, 1931, AMENDING THE EXISTING DISCIPLINARY REGULATIONS.

Delete Regulation 10 and *substitute* therefor the following :—

" 10. The Council shall consider the report and shall decide whether or not they intend to remove the name of the registered person from the register. Their decision may be reached by a resolution in one or other of the following forms which are intended for guidance only :—

Resolved :

That the Discipline Committee having reported to the Council that A.B. has been guilty of conduct disgraceful to him in his capacity as an architect, this Council intend to remove the name of the said A.B. from the Register in pursuance of Section 7 of the Architects (Registration) Act, 1931, but, before so doing, direct the Registrar to serve a written notice of the Council's intention on the said A.B. and to inform him that the Council will consider any representations with regard to the matter which may be made by him to the Council in the prescribed manner within 3 months from the service on him of the notice.

Or alternatively :

Resolved :

That, having received the report of the Discipline Committee and considered it, this Council does not intend to remove the name of A.B. from the Register."

Delete Regulation 12 and *substitute* therefor the following :—

" 12. After consideration of any representations made to it under Section 7 (5) of the Act the Council shall decide whether or not to cause the name of the registered person to be removed from the Register and, if they decide that it is to be removed, they shall determine whether or not he is to be disqualified from registration for any, and if so, what period. Their decision may be reached by a resolution in one or other of the following forms which are intended for guidance only :

Resolved :

That this Council direct the Registrar to remove the name of A.B. from the Register

(and that this Council determine that the said A.B. is disqualified for registration for a period of..... from this date)

and that this Council direct the Registrar to serve written notice of the removal (and determination) on the said A.B.

Or :

Resolved :

That this Council withdraw their intention to remove the name of A.B.

(and that the finding of the Discipline Committee be quashed.) "

MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

The Architects' Registration Council of the United Kingdom offer for award in June 1944 certain Maintenance Scholarships in Architecture. The scholarships will consist of a grant for the payment, in whole or in part, of the school fees and necessary

subscriptions, instruments, books, etc., and, when necessary, a maintenance allowance not to exceed as a rule £100 a year. The scholarships will be renewable from year to year until the student has finished his or her school training. They will be available for students of British nationality who could not otherwise afford such training to enable them to attend architectural schools approved by the Council. The scholarships will be available both for students who have already begun their training and for students wishing to begin their training. Scholarships will not be granted to students who will be less than 17 years of age on 1 October 1944.

Particulars and forms of application may be obtained from The Secretary to the Board of Architectural Education, A.R.C.U.K., 68 Portland Place, London, W.1.

Copies of previous years' examination papers may be obtained on payment of 6d.

The closing date for the receipt of applications, duly completed, is the 29 February 1944.

Book Reviews

HOUSING FOR THE COLONIES

Native Housing: a collective thesis by P. H. Connell, C. Irvine-Smith, K. Jonas, R. Kantorowich and F. J. Wepener. Witwatersrand University Press, Johannesburg, 1939. Ob. 8vo viii + 258 pp. + 18 plates. Price 10s. 6d.

By R. GARDNER-MEDWIN [*A.*]

The first important thing to be said about this book is that it is the only serious study of its kind. It is doubly important in view of the fact that the Colonial Office has officially recognised, even in the heat of war, the fearful necessity of immediate reforms in the living conditions of native populations. What is more, recent official reports, notably the 1942 report of the Comptroller for Development and Welfare in the West Indies, have recognised that re-housing programmes must be related to positive regional planning policies. This year, in the West Indian and West African colonies, the first steps have been taken in the direction of an all-embracing reconstruction programme when war ends.

In the West Indies, where negroes enjoy a much higher status in relation to the European community than they do in African colonies, a recent diagnosis revealed that most of the native workers lived in 2-room houses, allowing only 15 to 20 square feet per person. Official reports make it abundantly clear that bad housing and schooling conditions are the main causes of ill-health, lack of moral discipline, physical inefficiency and discontent. Agricultural, industrial, medical, sociological and labour reports are all emphatic on this point. It should be clear enough that re-housing of the native workers in our colonies has not only a moral but also an economic basis for action.

The authors of this thesis stress the need for genuine sociological and psychological study in tackling native housing problems. Rightly so; for if we are coming to accept the sociological basis as a principle in re-housing our own countrymen, it is very much more important that we should do so in re-housing "backward" negro communities. In this country the transfer of agricultural workers to urban districts has caused difficulties enough; but the transfer of negroes from kraal to city, without any compensating outlet for accumulated energy to replace the old native customs, produces social problems that can only be solved in terms of physical environment if planning is preceded by sympathetic and scientific analysis.

Wisely, the authors review the social position of the native population in relation to the present economic position. Not so wisely (from their own propaganda point of view) they spend a large part of their sociological introduction on a digest of Marxist theory. It is impossible to detach a regional problem of this kind from economic and political factors, but if they wished to convert as many as possible to the cause of higher standards of living for native workers, the authors might have done well to have relegated their detailed economic theory to the appendices. I felt the same way about the digest of Freud in the psychological chapter.

The complete analysis of the problem in this book is the prelude to an interesting architectural solution. The authors suggest that the necessary re-housing of 100,000 Bantu natives of Johannesburg should be grouped in townships of not less than 20,000. The segregation law, which rules that coloured communities should not be settled within three miles of the whites, makes it all the more necessary for the new townships to be self-contained communities.

Psychological considerations, demonstrating the need for a closely knit community life to replace the primitive kraal customs, lead to the conclusion that housing in 10-storey flats is more desirable than housing in dispersed bungalows on individual plots. The psychological argument is reinforced by economic and social considerations. It is pointed out, for instance, that ownership of house or plot is denied to the urban Bantu and that, therefore, one of the main arguments for the individual house is removed. The recent garden city development of Orlando is vigorously condemned for its lack of community organisation, the monotony of its ill-equipped shacks, the wastage of land and the needless expense of long roads and service lines. The very real need of the native to supplement his meagre wage by growing his own foodstuffs is catered for in the authors' solution by well-watered and drained allotment areas.

European minimum standards of space and equipment are assumed. The authors remind us that there is no scientific proof that primitive heredity prevents advance through education and environment to the standards of intelligence and common need which we cater for in the "superior races."

It is no fault of heredity that the majority of native labour is unskilled, but this present circumstance prescribes a method of construction which can be undertaken mostly by unskilled native workers. There is no space to describe the details of construction, the organisation of which is most thoroughly worked out. The general idea is a manufacturing plant on the site turning out prefabricated R.C. floor slabs and "Spongecrete" insulating wall slabs, which fit into a R.C. monolithic frame; the outer wall slabs having a hard cement impervious surface.

Some of the points in the carefully studied financial section are:

1. It is wrong to charge negroes rent calculated on the basis of white labour and on the capital cost of land, since negroes are paid on considerably lower rates and are not allowed to own land.
2. Rent plus travel to work expenses should not exceed a quarter of income. (At present rent alone is commonly 25s. a month and wages seldom exceed £4 a month.)
3. Rent should remain constant regardless of size of dwelling required to house a family in accordance with minimum standards.
4. Sanitary and other public services should be supplied on a non-profit basis.

The lay-out consists of large-scale forecourts of 10-storey flats as repeating elements in free landscape. The designs of individual buildings, when viewed through a magnifying glass, reveal a high standard of technique. The whole conception, with its main community elements arranged with something of the dramatic scale of the grand manner, is an example of how problems of really great social importance can inspire the most imaginative architectural interpretation. The wisdom of this particular interpretation depends on the extent to which 10-storey housing for Bantu graduates to city life proves to be practical psychology.

PLANNING PROBLEMS

Reconstruction and Town and Country Planning: with an examination of the Uthwatt and Scott Reports, by Sir Gwilym Gibbon, C.B., C.B.E., D.Sc. 8vo. 266 pp. Architect and Building News. 1943. 15s.

A reprint has been made of Sir Gwilym Gibbon's important analysis of the planning problem which originally appeared as a series of articles in the *Architect and Building News* in 1941. Since the articles were written the Uthwatt and Scott reports have been published and Sir Gwilym has added two chapters of critical commentary on them.

The general theme is cautionary—Sir Gwilym does not like the

present tendency towards centralisation and the increase of State authority which he criticises as a move towards the totalitarianism. Five central functions are defined :

1. The preparation of plans for those matters which must be planned for the country as a whole—outstandingly national communications and the designation of national reserves, and problems of national security.
2. To approve, amend or disapprove regional and local plans and to take appropriate action when regions, etc., are failing in their responsibilities.
3. To lay down standards which shall be of a kind to allow the utmost flexibility of application according to place and time.

4 and 5. To act as an information centre for the localities.

These functions are described in some detail, the general principle being that these should be the greatest possible local responsibility in all planning matters.

The other main policy matter dealt with in detail is the manner of land control. Sir Gwilym is strongly in favour of a system of pooled ownership rather than wholesale acquisition of land by the State. In this he is in general though not complete opposition to the proposals of the Uthwatt Committee. Sir Gwilym's land pooling proposals are described in detail and backed with an historical survey of the "mysteries of the valuation of land."

Although much of the book is concerned with these fundamental administrative and finance problems in which Sir Gwilym has had almost unrivalled experience, there is much of direct interest to "the practical planner."

In an important section on the pattern of big towns the author deplores the neglect of urban replanning and the basic principles of the central urban unit.

The proposals enunciated conform in many respects to those followed by the County of London plan : the splitting up of the amorphous mass of the city into communities, physically distinct and with life and character of their own, but near enough to form units in the larger mass of the city. In the course of this discussion Sir Gwilym discusses the various proposals of Corbusier, the Garden City Movement, Mars and others, and illustrates the planning schemes of various cities.

There are chapters on the making of the planner and planning education, traffic problems and temporary buildings, which the author favours as a means of providing the present generation with the benefits that planners can provide without the necessity of waiting for the full maturity of permanent architectural schemes.

Handbook of British Standards : B.S. Handbook No. 1, 1943. 8vo. 152 pp. B.S. Instn. 1943. 1s. 6d.

The new British Standards Handbook includes introductory chapters on B.S.I. work in the form of reports from the chairmen of all the committees. The Building Division has issued 19 new and revised specifications during the year and has 40 technical and 39 sub-committees at work. Among the specifications in course of preparation is one on Architectural drawing office practice, and others will deal with hard board and fibre board, metal tiles ; wall ties ; water-resisting plywood ; timber roofs ; and baths. The handbook ends with a complete list of all specifications.

Review of Periodicals

1943-44—I

CIVIL, including GOVERNMENTAL, CIVIC, Etc.

BUILDER, *1943 Aug. 13, pp. 127-9 ; pp. 133-4 :*
Public works in post-war U.S.A. Extracts from paper by F. W. Herring, Assistant Director, N.R.P.B., with leader pointing moral for Britain. Pp. 133-4 : Post-war building costs and policy : article by S. Hookway.

ARCHITECT AND BUILDING NEWS, *1943 Nov. 5, pp. 83-5 ;*
ARCHITECTS' JOURNAL, *Nov. 4, p. 346, xxxiv ;*
BUILDER, *Nov. 5, pp. 365, 367 :*
The House of Commons : report of Churchill's speech and debate in Parliament (Oct. 28) on rebuilding. Correspondence in THE TIMES following.

ARCHITECT AND BUILDING NEWS, *1943 Nov. 26, pp. 130-6 ;*
ARCHITECTS' JOURNAL, *Oct. 21 ;*
ARCHITECTURAL REVIEW, *Oct., pp. 93-4 ;*
BUILDER, *Nov. 26, pp. 427— ;*
BUILDING, *Dec. :*
Walthamstow Civic Centre ; by P. D. Hepworth [*F.*]. Municipal offices, assembly hall. (Law courts yet unbuilt.)

ARCHITECTURAL RECORD, *1943 Aug., pp. 45-55 :*
Recent municipal and county buildings in U.S. Borough Hall, Queens, New York City, architect W. Gehron, with A. J. Thomas ; Monterey County Courthouse, Salinas, California, by R. Stanton and T. B. Mulvin : Lenoir County Courthouse, Kinston, N.C., by A. M. Wooten, with J. J. Rowland : Municipal Auditorium and City Hall, Topeka, Kansas, by Griest and Coolidge.

BUILDER, *1943 Aug. 20, pp. 150-5 :*
Petty and Quarter Sessions Court House, Sussex, by C. G. Stillman [*F.*], County Architect. (Further reference.)

REVISTA DE ARQUITECTURA (Buenos Aires), *1943 July, pp. 254 :*
National Post Office building, Buenos Aires ; by Public Works Ministry. Fully illustrated and described.

JOURNAL OF THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA, *1943 Aug., pp. 124-9 :*
Wood a Norse building material ; by 2nd-Lt. J. Engh, R.N.A.F. Illustrated by Norwegian Air Force buildings in Canada. Barracks, etc.

ENGINEERING NEWS-RECORD (New York), *1943 Sept. 9, pp. 98-100 :*
Building for tests of U.S. Army equipment under varying climatic conditions. High-grade insulation design.

BUILDER, *1943 Oct. 29, p. 349 :*
Waterworks buildings (place and architects not stated).

JOURNAL OF ROYAL SOCIETY OF ARTS, *1943 Sept. 17, pp. 545-62 ; Oct. 1 :*
The Modern Power Station. Cantor lectures on I, the Boiler House, by E. L. Luly, of Babcock & Wilcox, and II, Coal and ash handling plant, by J. F. Mitchell, of Mitchell Engineering Co. *In October 1 :* III, Mechanical equipment of turbine house, by F. Shakeshaft, and IV, High-voltage power circuit control, by C. W. Marshall.

COMMERCIAL (SHOPS, OFFICES, BANKS)

ARCHITECTURAL FORUM (New York), *1943 Aug., pp. 92— :*
"Garden centre," San Francisco, by R. S. Soriano. Nurseryman's showroom : lively design with advanced technical equipment for plant and seed display.

BUILDER, *1943 Oct. 15, pp. 312-3 :*
Bookseller's shop, Cheltenham ; by A. F. French [*F.*].

ARCHITECTURAL FORUM, *1943 Sept., pp. 94-6 :*
Cosmetic shop for Macy (place unstated), by R. G. Belcher. Details of show-cases.

BUILDING, *1943 September, p. 233 :*
Walton Yacht Co. Office Building, Walton-on-Thames, by Jane Drew [*A.*]. Photos and review by J. R. Leathart [*F.*].

ARCHITECTURE ILLUSTRATED, *1943 July :*
Architects' office, Stoke-on-Trent, by Wood, Goldstraw & Yorath [*F.A.*].

ARCHITECT AND BUILDING NEWS, *1943 Dec. 3 ;*
ARCHITECTURAL RECORD, *1943 Sept., pp. 56-7 :*
Architect's office for L. Schmidt, Wichita, Kan. Photos, plan.

ARCHITECT AND BUILDING NEWS, *1943 Oct. 15, pp. 41-6 :*
Works administration office building ; by Edward D. Mills [*A.*]. Ground floor, raw materials store ; first floor, offices, including engineers' and architects' drawing office ; also works cloakroom for 15 men first floor, 108 women ground floor.

ARCHITECTS' JOURNAL, *1943 September 16, p. 201— :*
Large bank for Royal Bank Branch of English, Scottish and Australian Bank, Melbourne, by Stephenson & Turner [*FF.*].

TRANSPORT (WAREHOUSES, SILOS, AERODROMES)

ARKITEKT (Istanbul), *1943, No. 3-4, pp. 54-8 :*
Warehouse and office for the Department of Monopolies, Ankara, by A. Yapanar. Illus. by plans.

BUILDER, *1943 Oct. 1, pp. 268-70 ;*
OFFICIAL ARCHITECT, *Oct. :*
Grain-drying silos, by Ministry of Works for Ministry of Agriculture. Reinforced concrete bins about 75 ft. high in batteries of 12 or 24, with central drying tower. Details of construction and shuttering.

ARCHITECTURAL RECORD (New York), *1943 July, pp. 65-4 :*
Airports. Special section, including Articles on airports of future. Types of hangar trusses—9 types wide span roofs. Arches of laminated wood. Hangar door details and Time Saver Standards.

ENGINEERING NEWS-RECORD (New York), *1943 Aug. 12, pp. 81-6 :*
Bases for bombing from Britain : illustrated article on construction and plans of airdromes in Britain, by Waldo G. Bowman.

JOURNAL OF THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA, *1943 Aug., p. 132 :*
Hangar for Royal Canadian Air Force. View, plan.

ARCHITECTURAL FORUM (New York), *1943 Aug., p. 50 :*
Airport for Chicago, and note on "sky harbours."

ENGINEERING NEWS-RECORD (New York), *1943 Sept. 23, pp. 84-9 :*
Blimp hangars. Length 1,000 ft., span 297 ft., height 171 ft. Timber parabolic arch erected on travelling scaffold. Photo.

American City (New York), *1943 Aug., pp. 49-50 :*
Downtown air terminal for helicopters : project for Kansas City.

Pencil Points (New York), *1943 Aug., pp. 75-6 :*
Airplane engine test house. Plans, sections, etc.

INDUSTRIAL

Architectural Record (New York), *1943 July, pp. 53-64 :*
Industrial buildings : description and illustration of Bell Aircraft plant by Austin Co. ; Factory for Mechanical Handling Systems Inc. by J. Cromelin : precision instruments plant by Mundie, Jenson, Bourke & Havens.

South African Architectural Record (Johannesburg), *1943 May, pp. 104-8 :*
Albert Kahn : a tribute by W. D. H.

Architectural Record (N.Y.), *1943 June, pp. 49-60 :*
Medical goods factory and research laboratory for G. D. Searle & Co., Skokie, Ill., by H. G. Banse. A large building includes factory and research laboratories (chemotherapy), offices, warehousing and employees' recreation rooms. Completely air-conditioned and with advanced mechanical equipment throughout.

Pencil Points, *1943 Sept., pp. 72-5 :*
Telephone workshops and offices, Stockholm (L. M. Ericsson's), by T. Wennerholm.

Architectural Record, *1943 Nov. 12, pp. 58-65 :*
Newspaper printing works : notes on planning and illustrations of plant for various U.S. papers, by Kruse & Parish.

Architectural Forum (New York), *1943 July, pp. 87-90 :*
Glass works, by H. K. Ferguson Co., engineers.

Architectural Design and Construction, *1943 Oct., pp. 216-8 :*
Film design : opportunities for architects ; article by H. F. Hardy.

Light and Lighting, *1943 August, pp. 113-6 :*
Illumination in industry—report on discussions at the Oxford Ophthalmological Congress, July 8 and 9 1943.

Industrial Heating Engineer, *1943 Oct., pp. 84-6 :*
Radiant heating for industrial processes, by L. W. Andrew and E. A. Chamberlain.

Journal, Institution of Heating and Ventilating Engineers, *1943 Sept.-Oct., pp. 157— :*
Air-conditioning for industry. Paper by S. T. Luff.

WELFARE, CURATIVE (HOSPITALS, Etc.)

Journal, Institution of Municipal and County Engineers, *1943 Sept. 14, pp. 94-8 :*
Thoughts on hospital planning, by D. V. Marshall, M.B., F.R.C.S., Medical Superintendent City General Hospital, York.

Hospital and Nursing Home Management, *1943 Nov., p. 324 :*
War hospital in the tropics : standardised plan developed by U.S. Bureau of Yards and Docks and Navy Bureau of Medicine. Plan ; notes on construction.

Building and Engineering (Sydney, N.S.W.), *1943 June 24, pp. 22-23 :*
Hospital for 10,000 U.S. forces in Australia. 477 timber-framed huts, divided into two 1,000-bed and 3 750-bed units. District heating over 12 miles of pipe-run. Built by Allied Works Council. Brief note and photos.

Building and Engineering (Sydney, N.S.W.), *1943 May 24, pp. 9—:*
Parramatta District Hospital, Sydney, by Government Architect, N.S.W. Four-floor ward block for 143 beds, children's ward, operating suite, etc. Photos, no plans.

Hospital and Nursing Home Management, *1943 Nov., pp. 320-3 :*
Ventilation and air-conditioning in hospitals ; basic principles discussed by I. R. McKechnie, A.M.I.Mech.E., A.M.I.H.V.E.

Hospital and Nursing Home Management, *1943 September, p. 276 :*
Central Health Clinic, Southampton. Project by J. S. Fowler [*A.*], described by H. C. Maurice Williams, city M.O.H. Plans.

Builder, *1943 Nov. 5, pp. 371-2 :*
Health centres proposed for post-war Manchester ; by G. Noel Hill [*F.*], City Architect, S. Brierley [*L.*] and H. A. Johnson assistants. Plans.

Revista de Arquitectura (Buenos Aires), *1943 Aug., pp. 320-1 :*
Project for a blood transfusion centre and plasma laboratory ; by Dr. E. S. Sammartino. Plan.

Hospital and Nursing Home Management, *1943 September, pp. 286-7 :*
Mental hospitals : hints and suggestions for those who build, safety provisions, lighting, etc.

Architects' Journal, *1943 Nov. 5, p. 813 :*
Almshouses at Barton, Cambridge ; designed by E. Howes. Group of five round court. Views, plan.

PUBLIC RESORT (RESTAURANTS, BATHS)

Architectural Record (New York), *1943 Aug., pp. 67-84 :*
Restaurants and cafeterias : articles and illustrations and technical data, seating and table sizes, etc., in current U.S. work. Article : Kitchen planning, by H. Blumberg.

Architectural Review, *1943 Nov., pp. 135-6 ;*

Builder, *Sept. 17, p. 229 :*
" Railbars " : demountable snack stalls for erection on L.M.S. station platforms ; by L.M.S. Architect's Department under W. H. Hamlyn [*F.*]. Photos. First-class modern designing.

Journal of the Institution of Municipal and County Engineers, *1943 Oct. 12, pp. 149-57 :*
Harrogate Royal Baths, by L. H. Clarke [*A.*], Borough Engineer : new buildings for sulphur treatment baths. Photos.

Architect and Building News, *1943 Sept. 24, pp. 183-6 :*
Swimming bath, University College of Wales, Aberystwyth, by Percy Thomas [*P.*]. Covered bath with 75 × 30-ft. pool, one side all window. Photos, plans.

Arkitekt (Istanbul), *1943, No. 1/2, pp. 22-6 :*
Bathing pool and Turkish bath, Eskisehir.

Architectural Record, *1943 Aug., pp. 56-7 :*
Swope Park open-air swimming pool, Kansas City, Mo., by Marshall and Brown.

RECREATIONAL (COMMUNITY CENTRES, SPORTS BUILDINGS)

Builder, *1943 August 27, pp. 170-3 :*
Toynbee Hall, Whitechapel : extensions by Alister G. MacDonald [*F.*] to 19th-century Settlement and club buildings, including theatre for 400, music and art studios, canteen : also Juvenile Court Room.

Hem i Sverige (Stockholm), *1942 No. 4, pp. 391-3 :*
Village hall, seats 225, small stage, by Malte Håkansson.

California Arts and Architecture (Los Angeles), *1943 Aug., pp. 45-66 ;*

Pencil Points (New York), *Aug., pp. 51-7 :*
Community Centre, McLaughlin Heights, Washington, for 10,000 dwelling units in war-production centre. Social section : Auditorium, gymnasium, games rooms, children's rooms, library. Clinic : examination and treatment rooms, including maternity, eye, V.D., X-ray, etc., etc. Administration. Simple open design in timber. In C.A. & A. illus. and inf. on housing and schools ; also data on prefabrication methods (timber and reinforced concrete).

Architect and Building News, *1943 Oct. 10, pp. 58-9 :*
Soldiers' recreation centres in U.S.A., based on Government " type " plan.

Architectural Record, *1943 Sept., pp. 78—:*
Recreation centre, project by V. de Mars and J. Grace for F.S.A. Plan and drawings ; followed by full description, by F. R. S. Yorke, of Holford's Hostels for British war workers.

Architects' Journal, *1943 Nov. 18, p. 375 :*
Small sports pavilion for Leicester Y.M.C.A.

EXHIBITIONS

Architectural Review, *1943 Oct., pp. 95-106 :*
The War-time exhibition, by G. S. Kallmann. Survey of British war exhibitions, including Army Exhibition, Oxford Street, other shows by Ministry of Information, and other design units. Thoughtful analysis of technique and scope of exhibitions.

Building, *1943 Oct., pp. 254-8 :*
Army Exhibition, Oxford Street, one of best exhibitions yet seen in Britain, designed by Ministry of Information ; well illustrated.

RELIGIOUS, SEPULCHRAL

Architecture Illustrated, *1943 Sept., pp. 122-4 :*
St. Paul's Church, Edensor, Longton, Stoke-on-Trent ; by Wood, Goldstraw & Yorath.

Liturgical Arts (Concord, N. Hampshire), *1943 Aug., pp. 82-5 :*
St. Mark's Church, Burlington, Vermont, U.S.A., by Freeman, French and Freeman. Modern brick Roman Catholic church on Greek cross plan. Photos, plans.

Architects' Journal, *1943, Sept. 9, pp. 183—;*

Architectural Design and Construction, *1943 Aug., p. 172 :*
Tabernacle Church of Christ, Columbus, Indiana, by Eliel and Eero Saarinen, associated with E. D. Pierre and George Wright. Includes community centre, with auditorium and classrooms.

Arkitekt (Istanbul), *1943, No. 1/2, pp. 1-21 :*
Mausoleum of Ataturk : editorial, competition conditions and 3 premiated designs. No. 1 Onat and Arda of Istanbul, No. 2 J. Krüger, Berlin, No. 3 A. Foschini, Rome.

SCHOOLS

Journal of Royal Architectural Institute of Canada, *1943 July, p. 99 :*
To-morrow's schools, by John B. Parkin. School planning and design—nursery to junior college, with notes on requirements in each school type by leading educationists. Illustrated photos and plans.

COUNTRY LIFE, *1943 Aug. 13, p. 288 :*
The school building programme, by C. Hussey. Illustrated. Infants' School, Castleford, Yorks, by Oliver Hill [*F.*].

EDUCATION, *1943 Oct. 1, p. 405 ; Oct. 29, p. 525 :*
School sites and planning schemes : article, pt. I, by Dr. C. W. W. Read, Deputy Director of Education, and R. H. James, A.M.T.P.I., P.A.S.I., Senior Planning Assistant, W. Sussex. Analysis in terms of present educational system and to meet future trends. Pt. ii : useful data on school sizes, proportion of children in population, allocation of children to school types.

ARCHITECTURE ILLUSTRATED, *1943 Oct., pp. 117-21, 125-8 :*
Darfield Foulston Modern School and Assembly Hall for Batley Grammar School, both for C.C. West Riding, by H. Wormald [*A.*].

WERK (Zürich), *1943 June, pp. 177-91 :*
Swiss schools. Articles : "Unsere Schulen," by H. Pestalozzi ; "L'enseignement le l'architecture," by E. Beaudouin ; illus. and full description by Alfred Roth of Primary school and kindergarten, Bruderholz, Basel, by H. Baur ; three classroom pavilions, with play terraces and gymnasium—an important example. Also illus. of model and brief description project for vocational school, Basel, by H. Bauer. *Also* p. xxix, illus. and brief description of school, Kornhausbrücke, Zürich.

PENCIL POINTS, *1943 Sept., pp. 35-71 :*
Schools : useful articles illustrating recent U.S. schools. Rugen School, Ill., by Perkins, Wheeler & Will ; well illustrated, with details of classrooms, insolation, etc. Chabot Terrace, Vallejo, by Franklin and Kump & Wurster. Exeter Union High School, Calif., by Franklin and Kump. Also articles on prefab. classroom units, modernisation, etc.

BUILDING, *1943 Nov., pp. 280-1 :*
School, Winnetka, Ill., U.S.A., by E. & E. Saarinen, with Perkins, Wheeler & Will. (Further reference.)

EDUCATION, *1943 Nov. 26, pp. 656-8 :*
Public elementary school, Belfast (Carr's Glen), by R. S. Wilshire. 800 senior and junior pupils.

ARCHITECT'S JOURNAL, *1943 Sept. 23, pp. 222-3 :*
School for 800 senior and junior pupils, Belfast, by R. S. Wilshere [*F.*].

BUILDER, *1943 Oct. 22, pp. 331-3 :*
Southmead, Bristol, junior mixed and infant schools ; by A. F. French [*F.*]. Plan, photos.

BUILDER, *1943 Nov. 12, pp. 390-1 :*
Nursery schools : exhibition at Manchester by Manchester School of Art, under A. D. Jones [*A.*]. Plan and photos.

ARCHITECTS' JOURNAL, *1943 Sept. 30, pp. 237-40 :*
Senior school and technical institute, Bingley, Yorks, by W. G. Newton [*F.*] & Partners.

BUILDER, *1943 Sept. 3, pp. 191-2 :*
Dorchester Senior Mixed School, by H. E. Matthews [*A.*], Dorset county archt., C. Fifield [*L.*], assistant. 520 pupils.

TRAINING SCHOOLS ; UNIVERSITIES, COLLEGES

ENGINEERING NEWS-RECORD (New York), *1943 Sept. 9, pp. 80-3 :*
U.S. Coastguard training centre. Concrete block construction. Details thermal insulation.

ARCHITECTURAL FORUM, *1943 Sept., pp. 47-59 :*
Naval training station, East Coast, U.S., including drill hall, rifle-range, barracks, hospital, gymnasium, swimming bath, combined open-indoor auditorium. Construction, timber frame faced asbestos-cement. Also Mercantile Marine School, West Coast ; construction, timber weatherboarded.

REVISTA NACIONAL DE ARQUITECTURA (Madrid), *1943 No. 7, pp. 1-37 :*
University of Madrid. Plans, etc., for rebuilding the university destroyed in the Franco rebellion. Plans, elevations, etc., of Faculty buildings for medicine, philosophy and letters, odontology, pharmacy. Also brief descriptions of university cities, elsewhere in world.

TECHNICAL COLLEGES ; LABORATORIES

ARCHITECT AND BUILDING NEWS, *1943 August 27, pp. 129-32 :*
Music Building, University of Texas, by G. Dahl, with Dr. C. P. Boner as acoustic expert. Including concert hall for 500, rehearsal room, 18 teaching and class rooms, library, offices.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1943 Sept., p. 181 :*
Bell Telephone Laboratory, Murray Hill Unit, Summit, New Jersey, by Voorhees, Walker, Foley & Smith.

ARCHITECT AND BUILDING NEWS, *1943 Oct. 8, pp. 26-32 :*
Agricultural research building and dairy building for University College of Wales, Aberystwyth ; by P. E. Thomas [*F.*]. Research building includes laboratories, library ; dairy including cheese and butter manufactory, pasteurising rooms and bacteriological, etc., laboratories.

MUSEUMS

MUSEUMS JOURNAL, *1943 Sept., pp. 81-4 :*
Rochester (New York) Museum of Arts and Sciences, description of new building by Dr. A. C. Parker, Director. Photo, plan.

REVISTA DE ARQUITECTURA (Buenos Aires), *1943 Aug., pp. 295-302 :*
Municipal Museum, "Brigadier-General Cornelio de Saavedra," Buenos Aires. Small social history museum in restored private house. Architect, M. A. Dominguez.

FORM (Stockholm), *1942, No. 5, pp. 87- :*
New museum display furnishing in the Stockholm State Museum.

STUDIOS ; LIBRARIES

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1943 Nov., p. 228 :*
Studio for Arnold Zweig, by H. Rosenthal. "Experiment with wallboard" ; heat and sound insulation. Details.

LIBRARY ASSOCIATION RECORD, *1943 Oct., pp. 178-81 :*
Public Library, Swindon, adapted by the Surveyor's department from old shop.

ARCHITECTURAL RECORD (New York), *1943 July, pp. 42-7 :*
Houghton library of rare books, Harvard University, Cambridge, Mass., by Perry, Shaw and Hepburn. Carefully designed specialised equipment with air-conditioning and fluorescent lighting. Exhibit, Reading Graphic Arts Rooms, stacks and ample work rooms. Brick tradition form on steel frame.

DOMESTIC (generally, including CONSTRUCTION AND PLANNING)

BUILDING, *1943 Nov., pp. 274-7 :*
Speed and economy in house production, by Arnold Whittick. Study of post-war demand and possibilities of standardisation and prefab. techniques. Illustrated by J. Schreiner.

ARCHITECTURAL FORUM (New York), *1943 Aug., p. 102 :*
"Four-cylinder house" : small ply house, prefab. or *in-situ*, on quatrefoil plan, by A. T. Brown, Tueson, Arizona.

ARCHITECTS' JOURNAL, *1943 Sept. 2, p. 170 :*
Temporary house, by J. B. Pierce Foundation. Emergency minimal unit for temporary war use.

ARCHITECT AND BUILDING NEWS, *1943 Nov. 19, pp. 117-21 :*
Developments in American small house construction ; paper by Marc Peter at Architectural Association. Fully illustrated, photos, plans.

JOURNAL R.I.B.A., *1943 Oct., pp. 282-3 :*
House construction of a definite limited life : memo by R.I.B.A. at request of sub-committee of Central Housing Committee of Ministry of Health ; reference prefabrication and standardisation and housing finance.

ARCHITECTS' JOURNAL, *1943 Nov. 18, pp. 369-70 ; Nov. 19, pp. 387— :*
House construction of a definite limited life. Protests in correspondence at R.I.B.A. memorandum.

PLASTICS, *1943 Nov., p. 478 :*
"Specific gravity and housing" : editorial on analysis by R. V. Boughton of weight of materials used in typical house and possibilities of lightening by use of new materials.

COUNTRY LIFE, *1943 Nov. 19, pp. 898-900 :*
Timber prefabricated houses : the possibilities in solution of rural housing problem. Article by Prof. A. E. Richardson suggesting prefabrication in Canada of American colonial type houses. Illustrated photos and author's drawings.

ARCHITECTURAL FORUM (New York), *1943 Aug., p. 49 :*
"Pack-up house" : ply, monel metal and plastic transportable prefab. house, by Goodyear Tire and Rubber Co. Note ; photo.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1943 Nov., pp. 222-7 :*
Housing Forum. Weir, Atholl & Cowieson steel houses, built 1926. Experiment described by H. A. Mottram [*F.*]. Photo, details.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1943 Sept., pp. 185-6 :*
Experimental steel frame house without bearing walls, Texas ; by C. T. Granger. Structural section.

JOURNAL OF THE INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS, *1943 Oct. 12, pp. 137-48 :*
House planning : paper by A. Adlington, City Engineer, Lincoln. Analysis of types for Lincoln : also of householders' tastes. Plans.

HOUSING

HOUSING (Inst. Hg., Birmingham), *1943 Jan., pp. 33-7 :*
Housing : constructional errors and omissions : notes by C. A. Benson [*A.*], Chief Architectural Assistant, City of Leicester Housing Dept.

HOUSING (Inst. Hg., Birmingham), *1943 July, pp. 84-7 :*
Housing : problems and possibilities [in planning and equipment, chiefly in relation to legal and economic factors], by T. P. Rae [*L.*], Housing Director, Bolton.

HOUSING AND TOWN PLANNING BULLETIN (Nat. Hg. & T.P. Council), *1943 Oct.-Nov., pp. 17-23 :*
Problems of housing administration, by J. G. Martin, Sec. N.H.T.P.C. Post-war needs, land acquisition, housing standards, flats and houses, estate management, subsidies, rent, etc.

ARCHITECT AND BUILDING NEWS, *1943 Nov. 12, pp. 100-01 :*
"Goblin Market" : article by H. S. Goodhart-Rendel on State interference in housing, building societies, and G. D. H. Cole's pamphlet, Building societies and the housing problem.

NATIONAL BUILDER, *1943 Nov., pp. 68-72 :*
Housing a town : utopian scheme by R. Myerscough-Walker ; illustrated by author.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1943 Sept., pp. 191-7 :*
Housing society movement in Britain ; article by R. Browne, Secretary, National Federation of Housing Societies, illustrating many cottage and flat schemes.

ARCHITECTS' JOURNAL, *1943 Oct. 7, p. 250 ;*
BUILDER, *Oct. 8, pp. 290-4 :*
War-time housing scheme in Midlands, 155 acres, 1,000 houses, with complete social and commercial provision ; by J. B. Cooper [*F.*]. (BDR. :) house plans and views.

ARCHITECT AND BUILDING NEWS, *1943 Oct. 1, pp. 6-11 ;*
ARCHITECTS' JOURNAL, *Oct. 7, pp. 255-8 ;*
BUILDER, *Oct. 1, pp. 271-5 ;*
NATIONAL BUILDER, *Oct. :*
OFFICIAL ARCHITECT, *Oct. :*
Experimental houses, Coventry, under direction D. E. E. Gibson [*F.*], city architect. Structure, light tubular or welded strip steel frame, with asbestos-cement or tile-faced concrete cladding, and detailed attention to heating efficiency and simplicity and efficiency of services. Experimental planning. Illustrated by model, details and plans.

REVISTA NACIONAL DE ARQUITECTURA (Madrid), *1943 Feb., pp. 51-100 :*
Spanish housing, house plans and lay-outs, and construction systems illustrated.

WERK (Zürich), *1943 July :*
Swiss housing. An important series of articles illustrating contemporary Swiss work. Articles : The face of Swiss housing, by H. Schmidt, illustrated site plans and types of development ; "Bocksreit" housing estate, Schaffhausen, by W. Vetter, described A. Roth, terrace housing with timber structure between brick party walls, plan ; "Gwad" estate, Wädenswil, by Fischli and Stock, described by W. Blattmann, terraces on steeply sloping ground. Both schemes illustrated views, plans, details.

ARKITEKT (Istanbul), *1943, No. 3-4, pp. :*
Co-operative Society housing, Ankara. Various types one-family houses.

ENGINEERING NEWS-RECORD (New York), *News issue, 1943 Aug. 5, p. 15 :*
Housing for native miners, Nigeria. Short note and two illustrations.

SOUTH AFRICAN ARCHITECTURAL RECORD, *1943 June :*
Housing in South Africa : special number : introduction by Prof. G. E. Pearce. Housing legislation and finance, by L. Silberman. Native housing and accommodation, Bloemfontein, by J. R. Cooper, Superintendent, Native Admin. Dept. (illus. plans). Cape Town housing, described by W. S. Lunn, City Engineer, with special reference finance.

SOUTH AFRICAN ARCHITECTURAL RECORD (Johannesburg), *1943 July, pp. 136-170 :*
Housing in South Africa. Continuation of articles in June number. Durban, Johannesburg, Port Elizabeth, Pretoria, Bulawayo native and "sub-economic" housing, illustrated and described. Township lay-outs. Articles on social and economic considerations.

JOURNAL, ROYAL ARCHITECTURAL INSTITUTE OF CANADA, *1943 Sept. :*
Post-war housing in Canada. Various articles on economic and social and governmental aspects. Also articles on "Prairie slums, unlimited," co-operative housing, prefabrication, building industry, the engineer's contribution.

PENCIL POINTS (N.Y.), *1943 June, p. 70 :*
Public housing in N.E. States : article by M. Rosenauer [*F.*], illustrating schemes by photos and site plans. Followed by article on architectural features in public housing projects.

ARCHITECTURAL FORUM (New York), *1943 July, pp. 67-70, 112, 118 :*
"Spotlight on F.H.A." Survey of its function in U.S. housing.

ARCHITECTURAL FORUM, *1943 Sept., pp. 61-4 :*
U.S. post-war housing policy : interview with John Blandford, Director N.H.A.

ARCHITECTURAL RECORD (N. York), *1943 Sept., pp. 50-1 :*
U.S. post-war housing. Calculation of demand. Article by T. S. Holden, President, Dodge Corpn. "Public housing, a function of democracy," by G. H. Gray, F.A.I.A. ; reply to Hudnut's "Housing a democratic process," A.R. July.

CALIFORNIA ARTS AND ARCHITECTURE (Los Angeles), *1943 July, pp. 36-7, 44-50 :*
Housing, Bonecia, Calif., by R. G. de Lappe in General Lumber Co. prefabricated houses. Photos. *Also* Housing in San Antonio described in answers to series of questions on policy and technique.

AMERICAN CITY (New York), *1943 Aug., pp. 61-2 :*
Staten Island : project for 360 families in two-storey houses, by New York Housing Authority.

ARCHITECTURAL RECORD (N.Y.), *1943 June, pp. 42-6 :*
Housing and the democratic process, by Joseph Hudnut. The social and political implications of housing policies.

AGENDA, *1943 Aug., pp. 255-264 :*
Methods of mass-observation, with particular reference to housing, by Celia Goller.

BUILDING, *1943 Oct., pp. 250-3 :*
Standards of living and planning : housing and a minimum standard of living, by Arnold Whittick, with designs for minimum houses by J. Schreiner.

CALIFORNIA ARTS AND ARCHITECTURE (Los Angeles), *1943 Aug., pp. 24-37 :*
Small houses. Awards in competition for designs for post-war home, "minimum house" : 1st premium, Eero Saarinen and O. Lundquist. Pre-fabricated structure incorporating complete equipment, "biological and mechanical functions of home standardised . . ." First, second and third designs illustrated and described.

BUILDING, *1943 Sept., pp. 230-1 :*
Housing competition, organised by Incorporated Association of Architects and Surveyors ; winning designs reviewed.

ARCHITECT AND BUILDING NEWS, *1943 Sept. 17, p. 176 :*
Rural housing. Report of Housing Centre lecture by Edwin Gunn [*A.*].

JOURNAL OF CHARTERED SURVEYORS' INSTITUTION, *1943 Oct., pp. 166-8 :*
Rural housing : views of County Councils Association on standards, costs and in support of private enterprise housing.

HOUSING AND TOWN PLANNING BULLETIN (Nat. Hg. & T.P. Council), *1943 Oct.-Nov., pp. 25— :*
Rural housing problem, by N. Hobson, Vice-Chairman, Rural District Councils Association. Administration and housing standards.

ARCHITECT AND BUILDING NEWS, *1943 Aug. 13, p. 99 ;*
BUILDER, *Aug. 13, pp. 130-1 :*
Agricultural workers' cottages : designs passed by Ministry of Health of local variants of the standard design.

ARCHITECTS' JOURNAL, *1943 Sept. 23, pp. 212, 214 ;*
BUILDER, *Sept. 24, p. 249 :*
Rural cottages : further note on proposed 3,000 and note on Rural housing of 1902. (BUILDER :) illus. of first two cottages at Hildenborough, Kent.

BUILDER, *1943 Nov. 19, pp. 412-3 :*
Agricultural cottages at Micheldever for Winchester R.D.C., based on Ministry of Health plan.

JOURNAL OF THE ROYAL SANITARY INSTITUTE, *1943 Oct., pp. 160— :*
Post-war housing, by R. Fletcher, Borough Engineer, Smethwick, Hugh Paul, Medical Officer, Smethwick, John Wright, Sanitary Inspector, Smethwick.

ARCHITECTURAL RECORD (New York), *1943, July, pp. 48-51 :*
"A million houses—more or less" : estimates by R. Newcomb of post-war housing demand and distribution among income groups.

FLATS

ARCHITECT AND BUILDING NEWS, *1943 Nov. 5, pp. 87-8 :*
New flats in old buildings : reprint article by John Dower from A. & B.N. 1935.

BUILDER, *1943 Aug. 13, p. 129 :*
"Housing to a new design." Project for flats and small houses in co-ordinated design, by R. Myerscough-Walker. (Further entry.)

BUILDER, *1943 Aug. 20, p. 147 :*
Design of flats for the working classes : article by T. A. King. Advocates larger rooms. Special notes on kitchen planning.

ARCHITECTS' JOURNAL, *1943 Aug. 12, p. 111 :*
Flats for Hackney Borough Council, by Messrs. Joseph ; built 1938-40. 585 flats, 140 one room, 138 two rooms, 135 three rooms, 154 four rooms, 18 five rooms. Rents 6s. 7d. to 19s. 10d. Scheme includes clubroom, clothes-washing cubicles.

CLUBS, HOTELS, HOSTELS

ARCHITECTURAL REVIEW, *1943 Nov., pp. 123-4 :*
Stockholm Builders' Club ; by S. Markelius.

NUESTRA ARQUITECTURA (Buenos Aires), *1943 Jan., pp. 2-116 :*
Garages, service stations, petrol pumps, country clubs and swimming baths and bathing beach of the Automobile Club of Argentina throughout the country. Fully illustrated plans, photos.

ARCHITECTURAL RECORD, *1943 Sept., pp. 67-74 :*
Hotels. Hotel as an organism (functional analysis), by R. Heap. Illustration Statler Hotel, Washington.

ARCHITECT AND BUILDING NEWS, *1943 August 27, pp. 126-8 :*
Merchant Navy House, Glasgow, by S. Sim and Howard Robertson [*F.*], consultant. Club rooms.

REVISTA DE ARQUITECTURA (Buenos Aires), *1943 June :*
Hotels in Mar del Plata : illustrations, plans, descriptions. Nine modern sea-side hotels.

ARCHITECTURAL RECORD, *1943 Sept., pp. 75—:*
Hostel dormitories. Analysis of accommodation standards : illustrated by photos, plans.

PENCIL POINTS (New York), *1943 July, p. 54 :*
Mary Fisher Hall, Goucher College, Baltimore County, Md., by Moore & Hutchins. Residential hall for c. 180, with dining, sitting rooms, etc.

FARMS

ILLUSTRATED CARPENTER AND BUILDER, *1943 Aug. 13, p. 902 :*
Planning remote farms, by J. Y. Dunlop. Notes on simple construction methods.

BUILDER, *1943 Sept. 10, pp. 209-11 ; Sept. 17, pp. 230-33 ; Sept. 24 :*
Adaptable plans for farm buildings, by G. Rosenberg. Standardised dimensions applied to various farm buildings : stables, cow houses, etc. An important reference.

COUNTRY AND SMALL HOUSES

COUNTRY LIFE, *1943 Dec. 10 :*
Orchard House, Tickenham ; by Oliver Hill [*F.*].

ARCHITECTURAL FORUM (New York), *1943 Aug., pp. 81-91 :*
Houses by Pomeroy & Breines, McEnary & Kraft and others. Interesting structural and equipment details. Mostly varieties of timber siding. Pomeroy & Breines house with complete radiant heating.

ARCHITECTURAL FORUM, *1943 Sept., pp. 77-87 :*
" Hillside House," Berkeley, California, by H. H. Harris. Designed to make most of superb view ; interesting construction and plan. Fully illustrated photos, plans, details.

ARCHITECTS' JOURNAL, *1943 Nov. 4, pp. 339-42 ;*

PENCIL POINTS, *1943 May, pp. 34-43 :*
Steel prefabricated house, by R. Neutra, for Dr. G. Beckstrand at Palos Verdes, Los Angeles. Illus. plans, photos.

PENCIL POINTS (N.Y.), *1943 June, pp. 48-65 :*
Three patio houses in Brazil, by Bernard Rudofsky. Illustrated photos and plans.

ARCHITECTS' JOURNAL, *1943 Sept. 23, pp. 219-22 :*
House in Kent, by M. Colt. Prefab. sectional timber frame and hemlock weather-boarding.

ARCHITECTURAL REVIEW, *1943 Nov., pp. 121-3 :*
Small house in Sweden ; by S. Backström and Leif Reinius. Special feature : living room greenhouse, with visual and horticultural link with garden outside.

JOURNAL R.I.B.A., *1943 Nov., pp. 3-6 :*
Terrace housing in Switzerland—Bockstreit, Zürich. Reprint of article by A. Roth from WERK.

BUILDING, *1943 Nov., pp. 290-3 :*
Jerry building. Illustrated article by R. V. Boughton on jerry-building technique ; illegitimate means of cost saving and speeding-up ; bye-law evasion. Fully illustrated.

ARCHITECT AND BUILDING NEWS, *1943 Sept. 10, pp. 156-8 :*
Post-war terrace housing : a suggested scheme by E. D. Mills [*A.*] at 11 to acre. Also semi-detached houses by E. D. M.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1943 Oct., pp. 202-6 :*
Terrace housing : frontages and privacy. No. 10 in Housing Forum, by W. Segal ; plans, site plans and pictures.

BUILDING, *1943 Nov., pp. 282-5 :*
Planning [small houses] for small frontages, by W. Segal. Plans and drawings.

DOMESTIC DEPENDENCIES AND APARTMENTS

HEM I SVERIGE (Stockholm), *1941 No. 6 ; 1942 Nos. 1 and 2 :*
Small house planning details, by Georg Lindberg. No. 1 : Cellars. No. 2 : Washhouses. No. 3 : Larders and stores. No. 4 : Meter rooms and garages.

ARCHITECTS' JOURNAL, *1943 Nov. 18, pp. 376-7 :*
Works canteen at Redditch, by M. Peel and F. W. B. Yorke.

BUILDING, *1943 Oct., pp. 268 :*
Planning the kitchen. Extracts from recent book issued by Ascot Water Heaters. Illustrated.

ARCHITECTS' JOURNAL, *1943 Nov. 25, p. 390 :*
Domestic kitchen : electric " hub " unit, including refrigerator, cooker, hot-plates, etc.

HEM I SVERIGE (Stockholm), *1941 No. 2, pp. 136-7 :*
Two model Danish small house kitchens. Photo and plans.

ARCHITECTURAL FORUM (New York), *1943 Aug., pp. 99-101 :*
Kitchens. Prefab. unit kitchens, by H. C. Donner for Libbey-Owens-Ford Glass Co. ; by G. L. C. Earle. Complete washing, cooking, storing units.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1943 Sept., pp. 183-90 :*
Prefabricated kitchen designed on 4-in. module ; by R. Browne, sponsored by Radiation.

HOSPITAL AND NURSING HOME MANAGEMENT, *1943 Oct., pp. 295-300 :*
Planning the hospital kitchen in America. Analysis of sizes in relation to service. Illustrated plans.

HEM I SVERIGE (Stockholm), *1943 Aug., pp. 383-7 :*
Nurseries and nursery furniture : article by Ulla Eklöf.

DETAILS, CRAFTS, FITTINGS

ILLUSTRATED CARPENTER AND BUILDER, *1943 Oct. 29, pp. 1202-3, 1206 :*
" The orders once more," by M. S. Briggs [*F.*] : review of Normand's " Parallel " reprint, including examination of the place of the orders in architectural education and practice.

ILLUSTRATED CARPENTER AND BUILDER, *1943 Oct. 8, pp. 1119-20 :*
Spirals. Ionic volutes, methods of setting out.

PENCIL POINTS (New York), *1943 Aug., pp. 77 :*
Large windows comprising whole of living-room walls in houses, by E. D. Stone and C. Kock. Details and views.

HEM I SVERIGE (Stockholm), *1943 No. 5, p. 490 :*
Indoor growing plants as decoration. Illus. and information on suitable plants.

PENCIL POINTS (N.Y.), *1943 March, p. 77 :*
Stairway, cantilevered, by Gropius & Breuer.

HEM I SVERIGE (Stockholm), *1941 No. 1, pp. 38-43 :*
Small house stairways. Illustrated article by Georg Lindberg. Design and structural details.

ARCHITECTURAL RECORD (N.Y.), *1943 June, pp. 85-6 :*
Store-front awnings : time-saver standard.

STUDIO, *1943 Nov., pp. 137-47 :*
Mural paintings in war canteens and British restaurants. Article by Oliver Hill [*F.*].

CALIFORNIA ARTS AND ARCHITECTURE (Los Angeles), *1943 July, pp. 26-7 :*
" Lead and glass." Illustrations of stained glass by Emil Frei, contemporary American designer.

HEM I SVERIGE (Stockholm), *1941 No. 1, p. 37, and No. 2, pp. 130-1 ; and 1942 No. 1, pp. 47-50 :*
Clothes cupboards : planning notes on equipment, etc.

HEM I SVERIGE (Stockholm), *1943 No. 5, pp. 476-9 :*
Book-cases for small houses, by P. Marthin. Photos.

FORM (Stockholm), *1943, No. 6, pp. 104-5 :*
Bookshelves for private houses, by Bruno Mathsson. Description and photos.

NUESTRA ARQUITECTURA (Buenos Aires), *1943 June, pp. 293-9 :*
Fireplaces : article, illustrated photos, on traditional and modern fireplaces. Drawings technical design flues.

ARCHITECT AND BUILDING NEWS, *1943 August 27, p. 135 :*
Domestic fireplace by E. Gunn [*A.*]. Location in plan.

ARCHITECT AND BUILDING NEWS, *1943 Sept. 12, pp. 102-4 :*
" The chimney stack dominant," by E. Gunn. Illustrations and description of sixteenth and seventeenth-century East Anglian brick chimneys.

EDUCATION, *1943 Nov. 26, pp. 661-2 :*
Radio reception equipment for schools : article by J. McKnight, Administration Assistant, Central Council for School Broadcasting.

EDUCATION

PLAN (Architectural Students' Association), *1943 No. 3, pp. 8-11 :*
Architectural education in the U.S., past, present and future ; by G. S. Koyl, Dean, Department of Architecture, University of Pennsylvania.

THEORY

FORM (Stockholm), *1942, No. 10 :*
" Varans anpassing " : article by Alva Aalto.

ARKITEKT (Istanbul), *1943, No. 1/2, pp. 41-5 :*
The importance of architecture in present-day cultural life and the work of Adolf Loos. Article by Prof. Schütte.

REVISTA DE ARQUITECTURA (Buenos Aires), *1943 May, p. 170 :*
An introduction to architectural theory by H. M. Navarro, Professor in the National University of Tucumán.—Architecture and engineering, the 19th-century development of engineering, functionalism, individuality in art, etc.

REVISTA DE ARQUITECTURA (Buenos Aires), *1943 Aug., pp. 312-17 :*
An introduction to architectural theory (continued from 1943 June) ; by H. M. Navarro, Prof., National University of Tucuman.

ARCHITECTURAL REVIEW, *1943 Nov., pp. 139-40 :*
" Colour in buildings : some old friends " ; by John Piper. Illustrated by photo and author's drawings.

PRESERVATION

ARCHITECT AND BUILDING NEWS, *1943 Sept. 17, p. 17 :*
Novodevichy Convent, Moscow : restored by architects Sukhov and Baranovsky and Museum Director Nazarov. Illusd. note by Prof. D. Arkin.

COUNTRY LIFE, *1943 August 27, pp. 376-9 :*
Four historic houses safeguarded by the National Trust—Great Chalfield, Wilts ; Westwood Manor, Wilts : Speke Hall, Liverpool ; Bramshill, Hants. Article by C. Hussey.

HISTORY

COUNTRY LIFE, *1943 Aug. 20, pp. 332-5 :*
The architecture of Hertfordshire : relation of buildings to soil and to the future. Article by A. M. C.

COUNTRY LIFE, *1943 Oct. 22, pp. 728-31 :*
"East of Aldgate," by Hamilton Kerr. Architecture in Barking, West and East Ham, Wanstead.

COUNTRY LIFE, *1943 Oct. 22, pp. 732-3 :*
In the heel of Italy, by Chr. Hussey ; illustrated by photos.

ARCHITECT AND BUILDING NEWS, *1943 Nov. 5, pp. 89-93 :*
Sicilian architecture : photos and brief description of monuments.

PLAN (Architectural Students' Association), *1943 No. 3, pp. 4-5 :*
Ethiopian architecture ; by P. H. Wyman. Short illustrated article.

PENCIL POINTS (N.Y.), *1943 June, pp. 37-47 :*
"They never spoke Latin!" by Douglas Haskell. The American architectural tradition as exemplified in the contemporary "folk" building of army and defense housing, etc., with brilliantly chosen analogies from American-continent primitive building. Emphasis on the non-classical precedent. Superbly well illustrated.

PENCIL POINTS (New York), *1943 July, pp. 50-3 :*
Peruvian arch. and planning. Article by G. Jones—Odriozola, architect, on ancient city of Machupicchu, pre-Inca city in Andes.

JOURNAL OF THE AMERICAN SOCIETY OF ARCHITECTURAL HISTORIANS (Troy, N.Y.), *1943 Jan.-Apr., pp. 7-10 :*
History and the modern planner ; by Carl Feiss. The penetration of historical studies into the technique of contemporary planning.

ARCHITECTURAL REVIEW, *1943 Nov., frontispiece and pp. 143-5 :*
Kiev. Monastery of the Caves : illustrated and described by Nikolai Voronin.

COUNTRY LIFE, *1943 Oct. 1, pp. 596-9 :*
Bayham Abbey, Sussex : article by C. Hussey, illustrates landscape design by Humphry Repton.

RECONSTRUCCIÓN (Madrid), *1943 June-July, pp. 239-44 :*
"La casa de Nicolai-Frederick" : article on Russian peasant house near Lake Ilmen. Log-cabin construction described and illustrated.

ARCHITECTURAL REVIEW, *1943 Oct., pp. 114-5 :*
Norman-Byzantine in Sicily. Notes by C. Stewart, illustrated.

BUILDER, *1943 Sept. 3, pp. 420-3 ;*
COUNTRY LIFE, *Sept. 3, pp. 187-90 :*
Ashburnham House, Westminster, converted as the Churchill Club for U.S. and Dominion forces, by A. L. N. Russell [*F.*]. Historical articles by C. Hussey [*Hon. A.*] in C. L. and H. V. M. Roberts in BDR. touch on Inigo Jones attribution. C.L. article illustrated by good new photos. BDR. gives plan.

ARCHITECTURAL REVIEW, *1943 Oct., pp. 112—:*
The gratuitous semi-circle as an architectural motif in English late classical, analysed by John Piper.

ARCHITECTURAL REVIEW, *1943 Sept., p. li :*
Mr. Murray and Paxton's Chatsworth : an extract from Murray's handbook to Notts, Derby, etc., 1874.

ARCHITECTURAL REVIEW, *1943 Nov., pp. 125-34 :*
Thomas Archer—architect St. John's, Smith Square, London, St. Philip's, Birmingham, etc. "The third English Baroque architect." Excellently illustrated biography and critical article by Marcus Wiffen.

COUNTRY LIFE, *1943 Nov. 19, p. 906 :*
Sixteenth and seventeenth-century Wiltshire clothiers' houses—mostly near Corsham. Illustrated article by Chr. Hussey.

ARCHITECT AND BUILDING NEWS, *1943 Aug. 13, p. 101 :*
Maltese baroque architecture : photographs.

STUDIO, *1943 Oct., pp. 113-18, 121-29 :*
Brazilian colonial architecture, by J. de Sousa-Leão : and Modern architecture, by P. T. Boavista. Illus. by photos.

COUNTRY LIFE, *1943 Sept. 3, p. 429 :*
Blaise Hamlet, Henbury, Glos. by John Nash, purchased by National Trust. Correspondence and note referring to article by J. Summerson, C.L., 1934 Oct. 14.

ARCHITECT AND BUILDING NEWS, *1943 Sept. 17, pp. 168-9 :*
Blaise Hamlet, near Bristol : illustrated note by John Summerson Also illus. in ILLUS. LONDON NEWS.

COUNTRY LIFE, *1943 Aug. 13, p. 292 :*
Regency lighting fittings, by Miss M. Jourdain.

ARCHITECTURAL REVIEW, *1943 Oct., pp. 107-10 :*
"Vicarage picturesque" : study by Geoffrey Grigson of Bremhill Vicarage, Wilts, built Gothic revival and landscaped *à la* Repton, 1804.

ARCHITECTURAL REVIEW, *1943 Oct., xl :*
The Pantechnicon, London, famous furniture depository, painted by Kenneth Rowntree.

ARCHITECTURAL REVIEW, *1943 Nov., pp. 119-20 :*
Sir John Rennie, "the Byronic engineer," son of Rennie of Waterloo Bridge. Critical biography by John Russell.

ARKITEKT (Istanbul), *1943 No. 5-6, pp. 131-5 :*
Karl Friedrich Schinkel, 1781-1841 : article by Prof. W. Schütte. Illustrated by photos.

ARCHITECTURAL FORUM, *1943 Sept., p. 69 :*
"Does modern architecture pay?" Commercial security of modern style.

ARKITEKT (Istanbul), *1943, No. 3-4, pp. 67-75 :*
The new German architecture : articles, prompted by Ankara Exhibition, by A. Mortas and Paul Bonatz. Illustrated office building, Berlin, by Speer ; new bridges by Bonatz and Haerter.

ARKITEKT (Istanbul), *1943 Nos. 5-6, pp. 119-20 :*
New German architecture : article by Prof. Paul Bonatz.

BUILDING, *1943 Sept., pp. 222-6 :*
Post-war building in Poland, by Roman Soltynski. Discussion of problem and illustration of pre-war building, including swimming pool, Ciechocinek ; Warsaw Patent Office ; Convalescent home, Zegiestow.

FORM (Stockholm), *1942, No. 10, pp. 179-81 :*
Recent Swedish architecture : exhibition at Nordiska Museum, Stockholm, illustrating, *inter alia*, Eriksson Concert Hall, Göteborg ; F. Larsen's Nyborg Library. Review by H. Zimdahl.

ARCHITECTURAL REVIEW, *1943 Sept. :*
Swedish Architecture. Special No. introduced by Hakon Ahlberg, President, Federation of Swedish Architects. The Swedish scene : an English architect in war-time. Sweden, by W. G. Holford [*A.*]. A Swede looks at Sweden, by S. Backstrom. An American looks at Sweden, by G. E. Kidder Smith. Illustrates and describes in special articles or incidentally, Stockholm Crematorium, by Asplund ; Town Hall, Halmstad ; Museum, Linköping ; Bacteriological laboratory by Asplund; Sundsvall Hospital by H. Ahlberg ; Homes for old people, Elfringgarden, Stockholm ; several schools ; Band stand, Skansen ; Swimming Bath, Stockholm, by Hedquist ; cinemas, factories, flour mills and silos ; housing in flats and houses. Also incidental notes on timber building and prefabrication.

JOURNAL OF THE AMERICAN SOCIETY OF ARCHITECTURAL HISTORIANS (Troy, N.Y.), *1943 Jan.-Apl., p. 43 :*
"C.I.A.M.'s unwritten catalogue" : article by Giedion in reply to C. Feiss on C.I.A.M. research methods and present status in U.S.A.

ARCHITECT AND BUILDING NEWS, *1943 Oct. 22, pp. 61-4 :*
BUILDER, *Oct. 22, pp. 327-8 :*
Planning and building in the U.S.A. Paper to Architectural Association, London, by Sir Ernest Simon.

ARCHITECTURAL FORUM (New York), *1943 July, pp. 45-66 :*
William Wilson Wurster, Californian architect. Article on his work illustrated. Houses, University of California dormitory for 90 students prefabricated war housing, Vallejo, ski lodge, country office for Schuckl Canning Co., San Francisco, all with photos and plans.

ARQUITECTURA (La Habana, Cuba), *1943 May, p. 190 ;*
Planning in Cuba. Exhibition by Agrupación Tectonica de Expresión Contemporánea, Cuban branch of C.I.A.M. With description of A.T.E.C. aims. Illustrated.

PENCIL POINTS (N.Y.), *1943 Mar., pp. 64— ; Apl., pp. 65— ; June, pp. 66-9 :*
The architecture of the future, by Talbot Hamlin. Pt. 1, Post-war design : architecture of democracy. (Including study of prefabrication.) Pt. 2, Techniques, materials and design. Pt. 3, Architectural practice after the war, with special reference to employment in public offices.

DRAWING ; CEREMONIES

ILLUSTRATED CARPENTER AND BUILDER, *1943 Aug. 13, pp. 96-8 :*
Architectural perspective drawing, by W. E. Welch [*L.*].

LITURGICAL ARTS (Concord, N. Hampshire), *1943 Aug., pp. 79-80 :*
Laying the corner-stone of a church, by Rt. Rev. J. Nabuco. Roman Catholic ceremonial.

ARCHITECTURAL VOCATION ; PROFESSIONAL PRACTICE

OCTAGON, JOURNAL OF A.I.A. (Washington), *1943 July, pp. 3-10 :*
The Architect to-day and in post-war : Address to A.I.A. 75th annual meeting, by Brig.-General H. C. Newton. The challenge of everyday needs, public relations, culture, leadership in the profession.

OCTAGON : JOURNAL OF AMERICAN INSTITUTE OF ARCHITECTS (Washington), *1943 June, pp. 8-11 :*
Este Fisher's " Washington scene " : article on status and qualifications of architect *vis-a-vis* public.

BUILDER, *1943 Oct. 15, p. 305, pp. 307-12 :*
" The planning professions " : leading article and report of conference on respective parts of engineer, architect and surveyor, in connection with Institution of Civil Engineers exhibition.

OCTAGON (Washington), *1943 June, pp. 8-11 :*
The architectural profession and war service : statement by D. K. E. Fisher, Washington representative A.I.A.

JOURNAL OF THE R.I.B.A., *1943 Sept. pp. 255-9 :*
Advice to the student. A professional practice guide prepared by the R.I.B.A. Special Committee on Architectural Education.

PENCIL POINTS (New York), *1943 July, pp. 26-49 :*
" The Architectural Centre." A proposal by A. L. Kocher and H. Dearstyne for an organisation to co-ordinate building research planning, design and construction. Article gives plans of Centre buildings, discusses contemporary design in relation to engineering, industrial production, etc.

BUILDER, *1943 Sept. 10, p. 207 :*
Sir Ian MacAlister : note on impending retirement from R.I.B.A. secretaryship.

ARCHITECT AND BUILDING NEWS, *1943 Sept. 12 :*
Building societies : Minister of Health at annual meeting of Yorkshire County Association of Building Societies.

ARCHITECTS' JOURNAL, *1943 Sept. 23, pp. 210-12 :*
Building societies. Position and objectives in relation to housing and planning.

ARCHITECTS' JOURNAL, *1943 Sept. 30, pp. 229-30 :*
Building societies. Critical leader on anti-planning opinions of some building society chiefs.

BUILDER, *1943 Oct. 22, p. 334 :*
Codes of Practice (for building design and equipment) Committee of Ministry of Works ; 2nd Report, abstracted.

COUNTRY LIFE, *1943 Aug. 20, pp. 326-8 :*
Building costs, by Clough Williams-Ellis [*F.*], particularly with reference to building in local materials, including pise and cob, and to building organisation.

SOUTH AFRICAN ARCHITECTURAL RECORD (Johannesburg), *1943 May, pp. 94-9 :*
Cost-plus-profit system : enquiry by special committee of Institute of South African Architects : a critical review by D. S. Haddon.

BUILDER, *1943 Sept. 10, p. 216 ; Sept. 17, pp. 237-8 :*
The re-approach to quantities. 1. Premeasurement *versus* remeasurement. 2. The broader basis. By S. Hookway, P.A.S.I.

ART (general), ALLIED ARTS

FORM (Stockholm), *1942, No. 4, pp. 53- :*
" Svensk Form " exhibition of Swedish arts and crafts at Copenhagen.

(*To be continued*)

MEMBERS SERVING WITH THE FORCES

THIRTY-EIGHTH LIST

KILLED

CANNON, J. C. [*A.*], Capt. R.E.
DEAS, J. H. [*A.*], Lieut. R.E.
DENT, D. McA. [*A*]. Lieut. R.N.V.R.
DUNCAN, J. B. [*S.*], R.A.F.
LEWIS, PETER H. [*A.*], Flying Officer R.A.F.
LONGBOTTOM, LIONEL [*S.*], Lieut. R.E.
MATTHEWS, V. R. [*S.*], Flying Officer R.A.F.
THICKE, R. C. E. [*S.*], 2nd Lieut. R.E.
TROKE, WALTER E. [*S.*], Lieut. R.N.V.R.

MISSING

BRUCE, NIGEL [*A.*], Flight/Lieut. R.A.F.
GRUNDY, J. A. [*A.*], Flying Officer R.A.F.

PRISONERS OF WAR

ANNAND, GEORGE [*A.*], S/Sgt. R.E.
BAY, P. L. HANSEN [*S.*], Lieut.
GRAY, R. W. [*A.*], A.C.2 R.A.F.
HANCOCK, G. A. [*A.*], L/Bdr. R.A.
HEATH, W. F. G. [*A.*], Gnr. R.A.
STEWART, J. H. FRASER [*L.*], Lieut. R.A.

DISTINCTIONS

MENTIONED IN DISPATCHES

JONES, R. R. [*S.*], C.S.M. Intelligence Corps.

AWARDED THE MILITARY MEDAL

MCINTYRE, EDWARD M. [*A.*], L/Sgt. R.E. (Mr. McIntyre died of wounds received in the action.)

UNITS AND RANKS OF SERVING MEMBERS

ADAM, W. J. [*L.*], Q.M.S. Pioneer Corps.
ADAMS, J. T. [*S.*], S/Sgt. R.E.
ADAMSON, H. E. D. [*S.*], Capt. Royal Scots Fusiliers.
AITKEN, ALLAN [*S.*], Lieut. R.A.
ALTHAM, C. J. [*S.*], Lieut. R.E.
AMOS, P. C. [*A.*], Lieut./Commander R.C.N.V.R.
ANDERSON, ROBERT [*S.*], L.A.C. R.A.F.
ARNOLD, G. W. [*S.*], Pilot Officer R.A.F.
ATKINSON, W. W. [*A.*], F/Lt. R.A.F.V.R.
BAMBER, D. H. [*S.*], Capt. R.E.
BARBER, A. G. [*A.*], Capt. R.E.
BARTON, H. AUSTIN [*A.*], Major R.E.
BEATTY, MISS B. M. [*A.*], 2 Sub. A.T.S.
BEATY-POWNALL, D. H. [*A.*], Capt. R.E.
BETHAM, R. M. [*S.*], Lieut. R.N.V.R.
BLAIR, R. C. [*S.*], Major R.A.
BLAIR, W. [*A.*], Capt. R.E.
BLAKE, H. J. [*S.*], Sgt. R.A.F.
BLIGH, J. R. DE CLIFTON [*A.*], Lieut. R.E.
BLIGHT, E. [*S.*], Officer Cadet R.E.
BLYTHIN, C. J. [*F.*], Capt. R.E.
BOND, C. M. [*A.*], Officer Cadet R.E.
BOOTH, FRANK [*A.*], Capt. General List.
BOWRING, C. C. [*A.*], Lieut. R.E.
BOYMAN, L. T. [*S.*], Capt. R.E.
BRACKEN, C. E. [*L.*], Major R.E.
BRIGHT, G. N. [*S.*], Lieut. R.A.
BRINDLE, R. S. [*S.*], Capt. R.E.
BROADBENT, F. G. [*A.*], Major R.E.
BROOKHOUSE, R. J. [*S.*], Lieut. R.E.
BUNN, J. T. [*S.*], Lieut. The King's Own Royal Regt.
BURFORD, D. W. [*S.*], Officer Cadet R.E.
BUSH, S. P. [*F.*], Capt. Indian Engineers.
CARR, E. R. [*A.*], Lieut. R.E.
CASSIDY, W. J. [*L.*], Cpl. R.A.F.
CLARK, H. ANTHONY [*L.*], Lieut. R.E.
CLIFFORD-TURNER, H. D. [*S.*], Flying Officer R.A.F.
COAKES, P. A. [*S.*], 2nd Lieut. R.E.
COLE, J. C. T. [*L.*], Capt. R.E.
COULDRICK, H. C. C. [*F.*], Capt. R.E.
CROCKER, A. E. [*S.*], Lieut. R.E.
CROMPTON, R. H. [*A.*], Lieut. R.N.V.R.
CULPIN, CLIFFORD E. [*F.*], Major R.E.
CURTIS, J. [*S.*], E. D. L/Cpl. R.E.
DALLACHY, J. E. W. [*A.*], Lieut. R.E.
DAVIES, J. W. L. [*A.*], Flight/Lt. R.A.F.
DEAN, JESSE [*A.*], Cpl. R.E.
DENBIGH, G. D. [*A.*], 2nd Lieut. R.E.
DEUCHARS, JAMES [*A.*], Flying Officer R.A.F.
DORMAN, A. [*A.*], Lieut. R.E.
DOUGLAS, ANDREW [*L.*], Capt. R.E.
FARNSWORTH, J. E. [*A.*], Capt. R.E.
FOUNTAIN, E. W. [*A.*], Lieut. West African Engineers.
GARDNER, V. W. R. [*S.*], Pte. P.T.C.
GORDON, A. J. [*S.*], Major R.E.
GREEN, J. DUDLEY [*L.*], Sigmn. Div. Signals, India Command.
GREGORY, WALLACE J. [*F.*], Lieut.-Col. R.E.
HAMMETT, R. D. [*A.*], Lieut. R.E.
HARRISON, H. ST. J. [*F.*], Major R.E.
HEATHCOTE, C. [*S.*], Q.M.S. R.E.
HITCH, J. S. [*S.*], 2nd Lieut. R.E.
HOBKINSON, G. H. [*A.*], Capt. R.E.
HOLBROOK, L. C. [*A.*], Lieut. R.E.
HOLLOWAY, S. M. [*S.*], W/O R.A.F.
HUGHES, G. W. [*S.*], Sigmn. R.C.S.
HURST, R. W. [*A.*], Capt. R.A.
HUSAIN, S. M. [*S.*], Lieut. King George V's Own Sappers and Miners.
JACKSON, JOHN E. [*A.*], Lieut. R.E.
JACKSON, S. J. H. [*A.*], Capt. R.E.
JUDD, G. W. [*S.*], Lieut. R.A.
JUDSON, F. R. [*S.*], O/Coder R.N.
KELLETT, K. G. [*A.*], Lieut. R.E.
KENNAN, J. [*S.*], Lieut. R.E.
KEYTE, J. R. [*A.*], Major R.E.
KING, T. E. J. [*S.*], 2nd Lieut. R.E.
LACOSTE, G. A. C. [*A.*], Major R.A.
LAWSON, G. F. [*L.*], Capt. Black Watch.
LEARY, A. D. [*A.*], Major R.E.
LEGGATT, R. W. [*A.*], Lieut. R.E.
LEWIS, G. T. [*L.*], L/Cpl. R.E.
LEWIS, JOHN [*A.*], Lieut. R.E.
LOCK, S. C. [*A.*], Capt. R.E.
LUCAS, W. [*A.*], Major R.N.E.
LUPTON, T. M. [*S.*], Lieut. R.E.
MCMASTER, H. [*A.*], Lieut. R.E.
MADDOX, H. V. [*S.*], Officer Cadet R.E.
MOODY, A. R. [*S.*], Sub-Lieut. R.N.V.R.
MOXLEY, P. K. [*S.*], A.C.2 R.A.F.
NEILSON, ANGUS M. [*A.*], 2nd Lieut. R.E.
OSBORNE, J. L. [*S.*], Major R.E.
PORRI, A. P. [*A.*], Lieut. R.E.
POWELL, M. C. L. [*A.*], Capt. R.E.
PRESTON, F. LESLIE [*A.*], Squadron Leader R.A.F.V.R.
PRICE, T. G. [*S.*], Lieut. R.E.
PYNE, H. J. E. [*L.*], L/Sgt. R.E.
RADFORD, F. J. [*L.*], L.A.C. R.A.F.
RAINTON, D. [*S.*], F/Sgt. R.A.F.
RAMSBOTTOM, D. H. [*S.*], Spr. R.E.
READ, D. J. [*L.*], Major R.E.
RIDER, N. T. [*A.*], Lieut. R.E.
RIX, NORMAN [*S.*], Pilot Officer R.A.F.
ROWORTH, W. L. [*A.*], Lieut. R.E.
RUSH, V. J. [*A.*], Capt. R.E.
SCOTT, J. S. [*A.*], Major R.A.

SCOTT, WM. J. [*A.*], Lieut. R.E.
SELBY, L. J. [*A.*], S/Sgt. R.E.
SHOOLHEIFER, E. [*S.*], Cadet R.E.
SLADE, C. J. [*A.*], Capt. South African Engineering Corps.
SMITH, COLIN E. [*S.*], Sub-Lieut. R.N.V.R.
SMITH, F. G. [*A.*], Capt. R.A.
SPEAKMAN, H. G. [*A.*], Sub-Lieut. R.N.V.R. (Fleet Air Arm).
SQUIRE, RAGLAN [*F.*], Capt. R.E.
SUDBURY, F. T. [*A.*], Lieut. R.E.
SURMAN, J. M. [*S.*], Flying Officer R.A.F.
SUTTON, J. B. [*A.*], Pilot Officer R.A.A.F.
SYNNOT, REYMOND, M.C. [*F.*], Lieut.-Col. R.A.A.F.
TAPPER, MICHAEL, M.C. [*F.*], Lieut.-Col. R.E.
TATAM, R. [*A.*], Major R.E.
TAYLOR, DOUGLAS [*A.*], Capt. R.E.
TAYLOR, F. J., M.C. [*F.*], Lt.-Col. R.E.
THOMAS, A. E. [*S.*], Lieut. R.E.M.E.
THOMPSON, H. B. [*A.*], 2/Lt. R.E.
THOMSON, T. F. [*L.*], Major R.E.
THREADGOLD, R. A. [*F.*], Capt. R.E.
TINDALL, KENNETH [*S.*], L/Sgt. R.E.
TUCKER, LESLIE J. [*A.*], Major R.E.
TURNER, RAYMOND W. [*S.*], Capt. R.E.
TWEMLOW, W. J. [*A.*], Capt. R.E.
VINT, GEORGE B. [*S.*], Lieut. R.A.S.C.
WALDE, S. S. [*S.*], Capt. R.E.M.E.
WALDRON, H. G. A. [*L.*], Major R.E.
WALKER, COLIN [*S.*], Lieut. R.E.
WATSON, R. PAXTON [*F.*], Lieut./Commdr. R.N.V.R.
WATSON, W. E. [*A.*], Lieut. R.E.
WELLER, J. O. [*L.*], Lieut. R.E.
WESTENDARP, R. T. [*A.*], Lieut. R.E.
WESTWOOD, NORMAN [*A.*], L.A.C. R.A.F.
WHEELER-CARMICHAEL, S. D. [*A.*], Major The Seaforth Highlanders.
WHISTON, P. [*A.*], Lieut. R.E.
WHITE, L. S., M.B.E. [*S.*], Capt. R.A.
WHITING, BASIL T. [*A.*], Major R.E.
WILCOX, J. W. [*L.*], Capt. R.E.
WILLARS, F. L. [*A.*], Flying Officer R.A.F.V.R.
WILLIAMS, G. B. A. [*S.*], 2nd Officer Merchant Navy.
WOODGATE, THE HON. J. AUSTEN [*A.*], Lieut.-Col. O/C Falkland, Islands Defence Force.
WORTH, J. W. [*S.*], Lieut. R.E.

DISCHARGED ON MEDICAL GROUNDS

HILL, C. BENSON [*S.*], Tpr. Royal Tank Rgt.

RELEASED TO TAKE UP CIVIL APPOINTMENTS

FRY, E. MAXWELL [*F.*], Major R.E.
GARDNER-MEDWIN, R. J. [*A.*], Major R.E.
HUBBARD, R. P. S. [*A.*], Flight/Lt. R.A.F.

Membership Lists

ELECTION : MAY 1944

An election of candidates for membership will take place in May 1944. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday, 24 April 1944.

The names following the applicant's address are those of his proposers.

AS ASSOCIATES (2)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

CONNELL : PAUL HAROLD (Passed a qualifying Examination approved by the I.S.A.A.). School of Architecture, University of Cape Town, Cape Town, South Africa. Prof. L. W. T. White, A. S. Furner and G. E. Fitzgerald.

EDWARDS : MISS MARY DOROTHY, B.Arch. (Univ. Coll., Auckland, N.Z.), 2 Brighton Road, Parnell, C.4, Auckland, N.Z. Applying for nomination by the Council under Bye-law 3 (*d*).

ELECTION: FEBRUARY 1944

An election of candidates for membership will take place in February 1944. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday, 12 February 1944.

The names following the applicant's address are those of his proposers.

AS FELLOWS (3)

DAVIES : DAVID OWEN HARRIS [*A.* 1920], Housing Dept., Council House, Birmingham ; 6 Grange Road, Erdington, Birmingham. L. H. Keay, G. G. Wornum and Herbert Jackson.

HUTTON : GEORGE ROY, F.S.I. [*A.* 1936], County Archt., Oxfordshire County Council, 3 Becket Street, Oxford ; 4 Sunderland Avenue, N. Oxford. H. W. Smith, Thomas Rayson and R. F. Dodd.

SYMCOX : EDGAR JOHN [*A.* 1923], County Archt., County Hall, Ipswich ; Thurleston Farm House, Whitton, near Ipswich. E. T. Johns and applying for nomination by the Council under Bye-law 3 (*d*).

AS ASSOCIATES (10)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

CADWALLADER : JOHN DOUGLAS [Final], 212 Penns Lane, Sutton Coldfield. Herbert Jackson, George Drysdale and Reginald Edmonds.

DAVEY : WILLIAM GEORGE HARVEY [Special Final], 31 Beauval Road, East Dulwich, S.E.22. Arthur S. Ash, Herbert W. Matthews and Stanley Hamp.

GATOFF : HENRY, Dip.Arch. [King's College (Univ. Durham) Newcastle-upon-Tyne], 74 Acanthus Avenue, Fenham, Newcastle-upon-Tyne. W. B. Edwards, R. N. MacKellar and F. W. Harvey.

HAND : KEVIN P., B.Arch. [Univ. Coll., Dublin], 18 Fairview Avenue, Clontarf, Dublin. J. V. Downes, Vincent Kelly and P. J. Munden.

HARPER : WILLIAM STANLEY [Final], 61 Harlington Court, Lansdowne Way, S.W.8. George Hollins, Paul Badcock and R. E. Enthoven.

MCCORMICK : WILLIAM HENRY DUNLEVY, Dip. Arch. [Lpl.]. (Univ. Liverpool), 25 Clarendon Street, Londonderry, Northern Ireland. Prof. L. B. Budden, F. J. M. Ormrod. Applying for nomination by the Council under Bye-law 3 (*d*).

MCMAHON : COLM JOHN, B.Arch. [N.U.I.] (Univ. Coll., Dublin), 14 Albany Road, Ranelagh, Dublin. Applying for nomination by the Council under Bye-law 3 (*d*).

TAYLOR : MRS. SHEILA DOUGLAS [Univ. of Liverpool], Keld, 14 Elmcroft Lane, Hightown, Liverpool. Prof. L. B. Budden, J. E. Marshall and Leonard Barnish.

THOMAS : LLEWELLYN [The Polytechnic, Regent Street, London], 2 Prince's Rise, Lewisham, S.E.13. Joseph Addison, J. K. Hicks and R. B. Craze.

TIERNEY : LIAM PATRICK [Univ. Coll., Dublin], 2 Corry Square, Newry, Co. Down. F. G. Hicks, Vincent Kelly and J. J. Robinson.

AS LICENTIATES (14)

BELL : DOUGLAS, County Archt.'s Department, N.R.C.C., County Hall, Northallerton ; 46 Crosby Road, Northallerton. J. R. White, William Haslock and R. R. Kitching.

CAMISH : CYRIL, L.C.C., County Hall, Westminster, S.E.1 ; 28 Bush Grove, Stanmore, Middlesex. J. W. Hepburn, Edwin Williams and R. Wilson.

CAMPBELL : JOHN WILFRED, Superintending Civil Engineer's Dept., Malta ; Court Cottage, Mill Lane, Prestbury, Cheltenham, Glos. Thomas Overbury, G. J. Bell and Arthur Harrison.

CHAMPKINS : THOMAS GORDON, Ministry of Works ; 19 Oakland Way, Ewell Court, Ewell, Surrey. Stanley R. Miller, Gerald Unsworth and John L. Denman.

FORD : JAMES FULTON, 63 George Street, Edinburgh 2 ; 88 Grange Loan, Edinburgh 9. J. D. Cairns, T. F. Maclennan and J. R. McKay.

GIDDENS : JOSEPH JONATHAN, 12 Parkhill Road, N.W.3. Stanley Hamp, H. W. Binns and S. R. Miller.

HARDWICK : WILLIAM GEORGE, c/o D.C.R.E., Abercrombie Street, Chesterfield ; 5 Morris Drive, Highfield, Chesterfield. Applying for nomination by the Council under Bye-law 3 (*d*).

LOWE : BERNARD SIDNEY, 5 The Crescent, Bearley Cross, Wootton Wawen, Nr. Birmingham. L. S. Stanley, J. B. Surman and Herbert Jackson.

MASON : JAMES FRANCIS, 61 South Molton Street, W.1 ; 10 Pear Close, Kingsbury, N.W.9. W. B. Simpson, L. R. Guthrie and Joseph Hill.

MORRIS : JOHN CHARLES, Ministry of Aircraft Production, S.W.1 ; 27 Repton Road, Kenton, Harrow, Middlesex. Terence Carr, Herbert Passmore and A. P. Robinson.

MOSS : CYRIL EDWIN, c/o Messrs. Bothams & Brown, Chipper Lane, Salisbury ; " St. Francis," Francis Way, Salisbury. C. O. Hooper and applying for nomination by the Council under Bye-law 3 (*d*).

RICHARDS : CHARLES ARTHUR, Orchard Cottage, Orchard Lane, Pilgrims Hatch, Brentwood, Essex. W. Evans, A. B. L. Roberts and H. Tomlinson.

TOWNSEND : GEOFFREY PAULSON, 14 Trafalgar Road, Twickenham, Middlesex. Applying for nomination by the Council under Bye-law 3 (*d*).

VENABLES : WILLIAM GWYN SCALE, War Damage Commission, Cardiff ; "Torcroft," 75 Kyle Crescent, Whitchurch. L. R. Gower, E. E. Edmunds and T. A. Lloyd.

ELECTION : DECEMBER 1943

The following candidates for membership were elected in December, 1943.

AS FELLOWS (4)

BLAKE : JOHN PATRICK [*A.* 1924].
BRADBURY : RONALD, B.A., M.Sc., Ph.D., A.M.T.P.I. [*A.* 1930], South Shields.
SCOTT : ROBERT DUNCAN [*A.* 1931].
SMITH : HARRY HIRST [*A.* 1926], Manchester.

AS ASSOCIATES (15)

BOOTH : RAYMOND RICHARD.
CARO : MISS RACHEL ALICE.
CARVILL : LOUIS, Dip.Arch.Dist. [Liverpool], Dublin.
CLERK : THEODORE SHEALTIEL, Edinburgh.
DOCHERTY : JAMES, Glasgow.
EASTWICK-FIELD : MRS. ELIZABETH, Cambridge.
HAMMOND : HORACE GAEL.
JOHNSON : FRANCIS ANTHONY, B.Arch., Dublin.
MACKENZIE : ALAN.
MITCHELL : JOHN, Oldham.
O'FARRELL : MISS MAUREEN J., B.Arch., Dublin.
PAYNTER : MISS RACHEL MARY, Alnwick.
TRIGG : GEOFFREY HOWARD.
WEED : CHARLES HAROLD.
WILSON SMITH : ROY SEATON, Nottingham.

AS LICENTIATES (13)

ANGUS : JOSEPH MIDDLETON, Newcastle-on-Tyne.
BANKS : JOHN THOMAS.
BOOTH : LAURENCE GORDON, Leeds.
BULLMAN : ARTHUR, Nottingham.
CLARKE : ERNEST WILLIAM, Ely, Cambs.
EVANS : EDWARD T., Menai Bridge.
FINDLAY : GEORGE ANDERSON, Glasgow.
FISH : FREDERICK JAMES, Liverpool.
HASKINGS : BRUNEL FREDERICK GEORGE.
HORNSEY : KENNETH, Trowbridge.
ROBERTS : HAWORTH OWEN, Leamington Spa.
ROSS : MELVILLE, Leeds.
SMITH : REGINALD GEORGE.

Notices

THE USE OF TITLES BY MEMBERS OF THE ROYAL INSTITUTE

In view of the passing of the Architects Registration Act 1938, members whose names are on the Statutory Register are advised to make use simply of the title "Chartered Architect" after the R.I.B.A. affix. The description "Registered Architect" is no longer necessary.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election they should send the necessary nomination forms to the Secretary R.I.B.A. as soon as possible.

ANNUAL SUBSCRIPTIONS

Members' subscriptions, Students' and Subscribers' contributions became due on 1 January 1944.

The amounts are as follows :—

Fellows	£5 5 0
Associates	£3 3 0
Licentiates	£3 3 0
Students	£1 1 0
Subscribers	£1 1 0

NOTE.—By a resolution of the Council dated 20 July 1931 the subscriptions of R.I.B.A. members in the transoceanic Dominions who are also members of Allied Societies in those Dominions are reduced to the following amounts as from 1 January 1932 :—

Fellows	£3 3 0
Associates	£2 2 0
Licentiates	£2 2 0

Members who are already registered under the Architects' Registration Act 1931 are reminded that the annual renewal fee of 10s. became due on 1 January 1944, and should be forwarded DIRECT to the *Registrar, The Architects' Registration Council*, 68 Portland Place, W.1.

COMPOSITION OF SUBSCRIPTIONS FOR LIFE MEMBERSHIP

Fellows, Associates and Licentiates of the Royal Institute may become Life Members by compounding their respective annual subscriptions on the following basis :—

For a Fellow by a payment of £73 10s. (70 guineas).

For an Associate or Licentiate by a payment of £44 2s. (42 guineas), with a further payment of £29 8s. (28 guineas) on being admitted as a Fellow.

In the case of members in the transoceanic Dominions who are members of Allied Societies in those Dominions, the following basis will operate :—

For a Fellow by a payment of £52 10s. (50 guineas).

For an Associate or Licentiate by a payment of £31 10s. (30 guineas), with a further payment of £21 (20 guineas) on being admitted as a Fellow.

Provided always that in the case of a Fellow or Associate the above compositions are to be reduced by £1 1s. per annum for every completed year of membership of the Royal Institute after the first five years, and in the case of a Licentiate by £1 1s. per annum for every completed year of membership of the Royal Institute, with a minimum composition of £6 6s. in the case of Fellows and £4 4s. in the case of Associates and Licentiates.

ELECTION, JULY 1943

Mr. Harry Allberry, whose election as a Fellow was announced in the August issue of the JOURNAL, has decided to revert to membership in the class of Associates.

The election of Mr. E. N. Spiers as a Licentiate has become void.

COMPETITION

BALLYOWEN, CO. DUBLIN : NEW TUBERCULOSIS SANATORIUM

The Corporation of Dublin invite architects to submit in competition designs for a new Tuberculosis Sanatorium to be erected at Ballyowen, Co. Dublin.

Assessors :—Harry Allberry [*A.*] (Chairman) ; Vincent Kelly, P.R.I.A.I. [*F.*] ; J. Murray Easton [*F.*] ; Ralph Byrne, F.R.I.A.I. ; Dr. A. J. Walsh, M.B., Ch.B., D.P.H.

Premiums :—£500, £350, £250 and £150.

Last day for submitting designs, 30 June 1945.

Last day for questions :—21 July 1944.

Conditions of the competition may be obtained from the City Manager and Town Clerk, Public Health Department, Municipal Buildings, Dublin.

Deposit £3 3s.

MEMBERS' COLUMN

PARTNERSHIP

Mr. Hylton B. Elkington [*F.*] has taken into partnership Mr. F. W. Andrews [*L.*], who has for over twenty years been associated with the firm of Geo. Elkington & Son. The practice will be carried on under the present title which has been in use since 1875.

APPOINTMENT

Mr. Alner W. Hall [*F.*], has been appointed architect for the rebuilding of Guy's Hospital.

BOOKS WANTED

Retired Fellow wishes to purchase at reasonable prices : Latham, *In English Homes*, vols. 1 and 2 ; Davie and Dawber, *Old Cottages and Farm Houses and other stone buildings in the Cotswold District* ; Parkinson and Ould, *Old Cottages and Farm Houses and other half-timbered buildings in Shropshire, Herefordshire and Cheshire*.—Write offers to Box 2012, c/o Secretary, R.I.B.A.

WANTED to purchase new or secondhand a copy of *Ernest Gimson, His Life and Work*.—GEO. H. ANDERSON, "The Croft," Breydon Road, Sprowston, Norwich.

WANTED the following books :—Richardson & Eborlein, *The English Inn, Past and Present* ; Faber, *Reinforced Concrete Simply Explained* ; Faber, *Simple Examples of Reinforced Concrete Design*.—Offers to L. E. LUCK (Student), 5 Cumberland Villas, Milton Road, Gravesend.

WANTED copies of *Modern Cinemas* (Architectural Press, 1936) ; *E. & O. E. Planning Year Book* (Architect and Building News, latest available year's issue) by Student in H.M. Forces. Current prices will be paid.—Reply Box No. 5144, c/o Secretary, R.I.B.A.

WANTED. Any copies of the *Architectural Review*, for 1925 to 1930, and *Architectural Journal*, 1926. Please state numbers for sale, and price.—A. N. HOLT, 20, Exchange Street, E. Liverpool.

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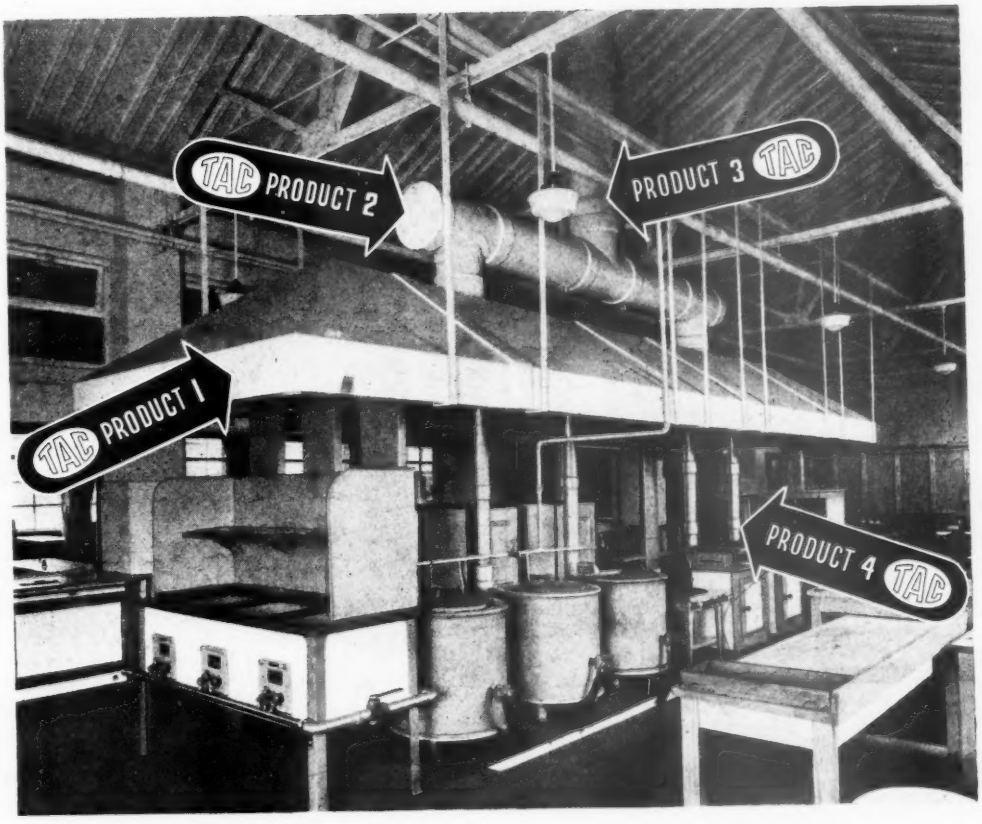

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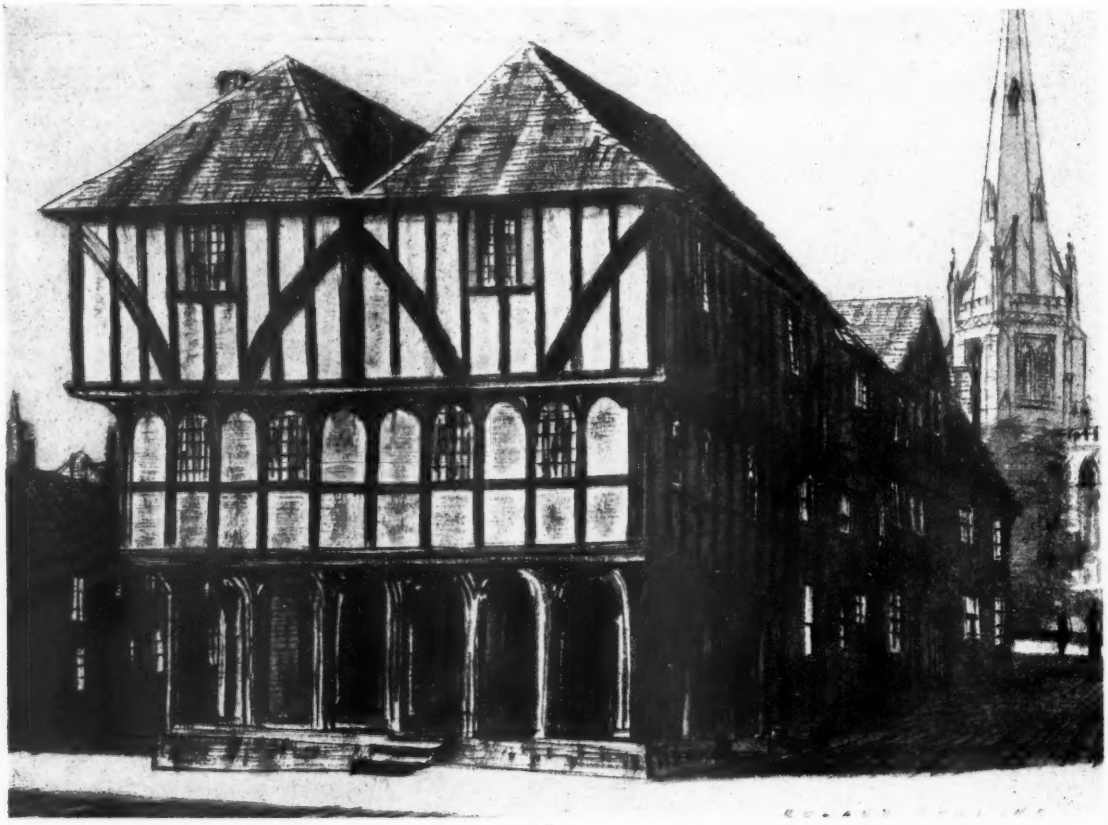

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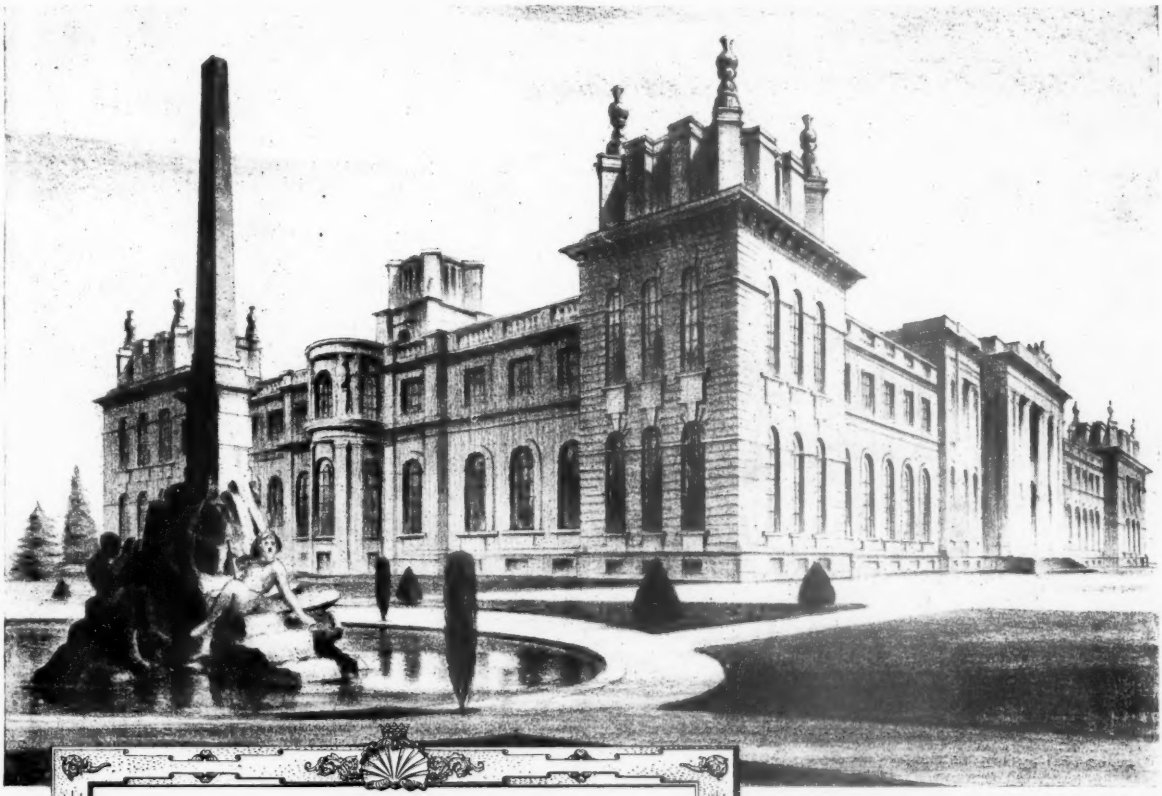

MEMORIAL OF VICTORY

Blenheim Palace, Oxfordshire: England's largest country house; designed by Sir John Vanbrugh (1664-1726) on estate presented by nation to Marlborough after famous victory at Blenheim, 1704. Vanbrugh's extremely individual style, employing Palladian, baroque and medieval motifs, has provoked severe censure and inspired warm praise. His maturest design is considered to be Seaton Delaval

YEARS of effort, peril, triumph have brought Vanbrugh's work into better perspective. With all his extravagancies, he understood better than any architect since the Roman Empire, the symbolism of military achievement; and Blenheim, in its enormous scale, its defiant gestures, its triumphant array of martial emblems, its singular blend of palace and fortress, is a supreme commemoration of Victory. He saw truly and made a house for giants and heroes . . . . . In the age of the first Churchill, victory expressed itself in building — a natural sequence, to be repeated in our own time. We hope that our national rebuilding will be as worthy of our victory . . . . . and count with confidence on playing a useful part in it.

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January 24th, 1944.

TO READERS OF THE "R.I.B.A. JOURNAL"

SERVING IN H.M. FORCES

Facilities for keeping in touch with wartime developments in building practice and technique are largely denied to those architects, engineers and students now serving in His Majesty's Forces. In the form of Data Sheets we are collating all information relating to the many structural applications of the tubular steel section. A number of these Sheets are already available, others are in course of preparation.

If members of H.M. Forces will communicate with us we shall be indeed glad to add their names to the list of those architects, engineers and others who have requested that we should supply them with all technical data and information relating to our present constructional and research activities.

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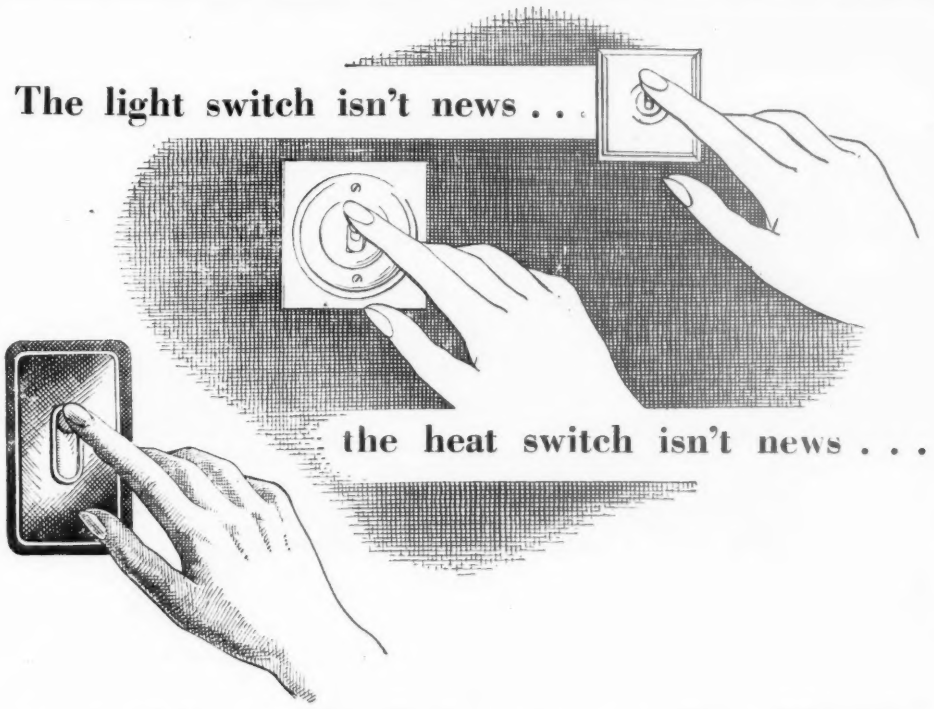

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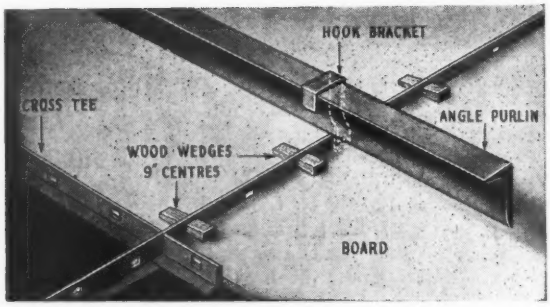
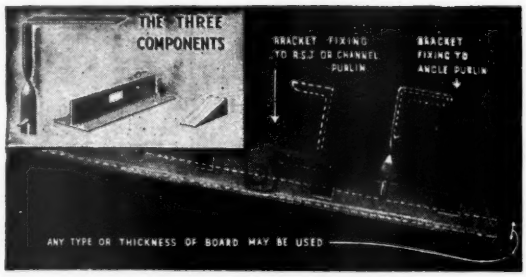
Escalator Tunnel at St. John's Wood Underground Station. Architect: S. A. Heaps.

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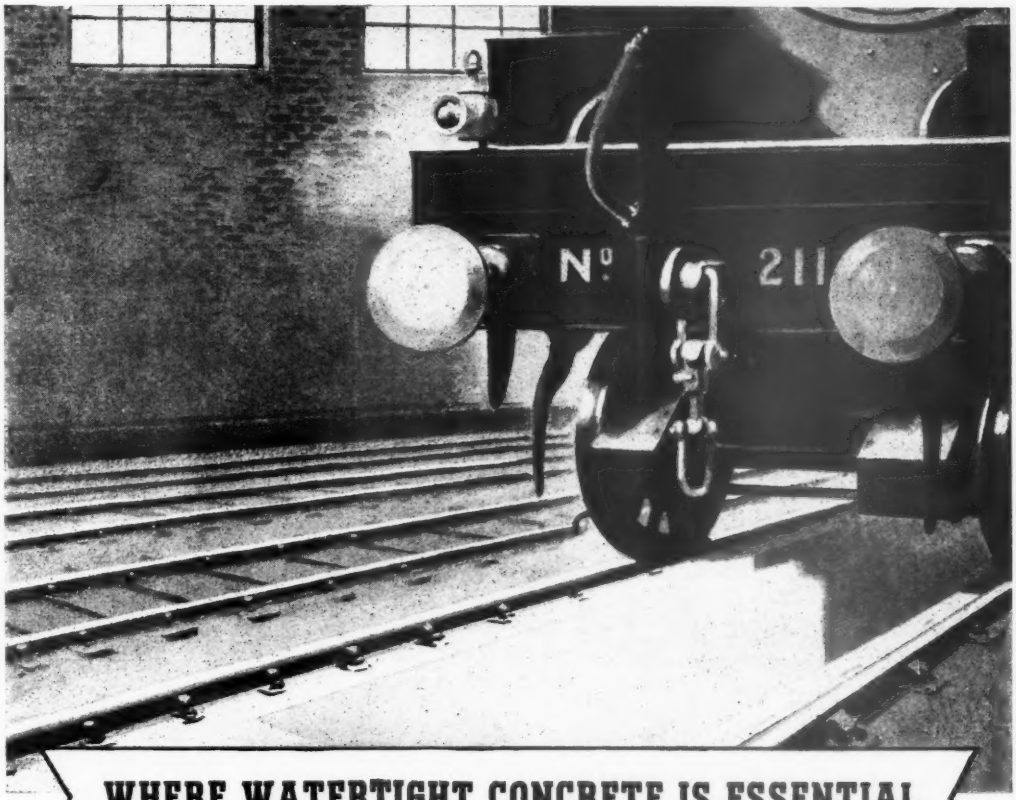

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What of OUR future?

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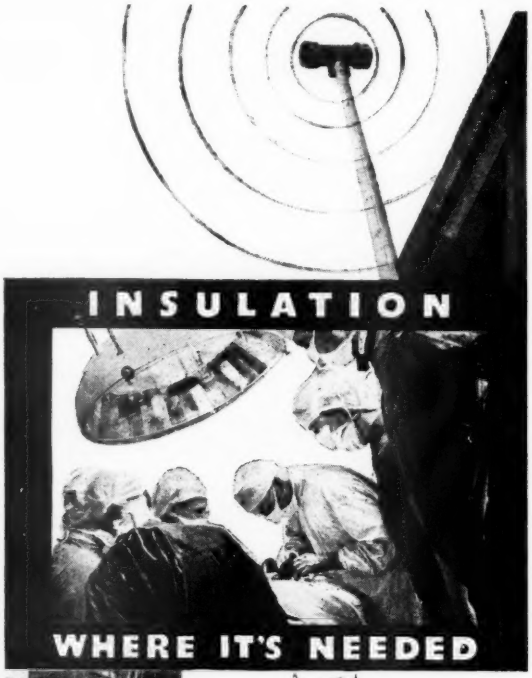

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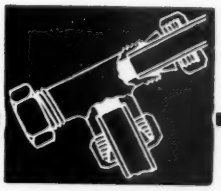

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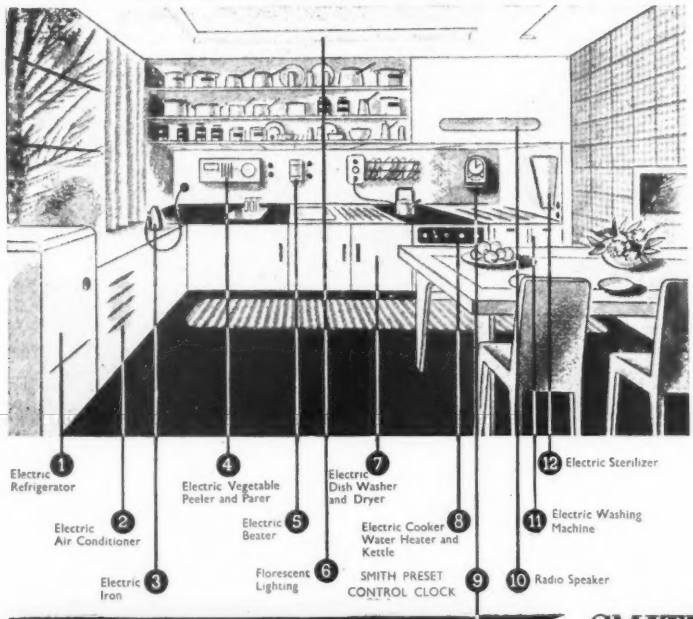
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No. 3

THE KITCHEN

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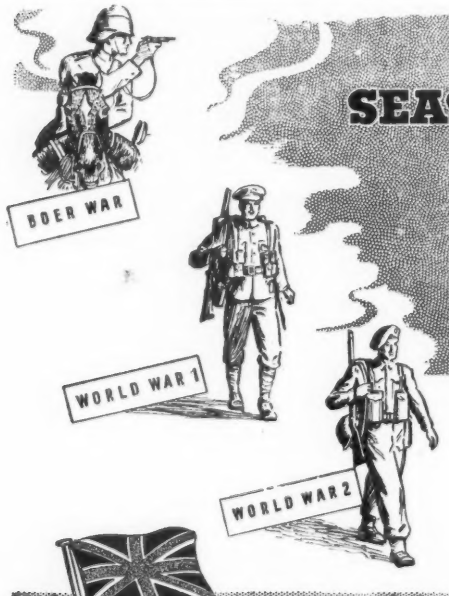

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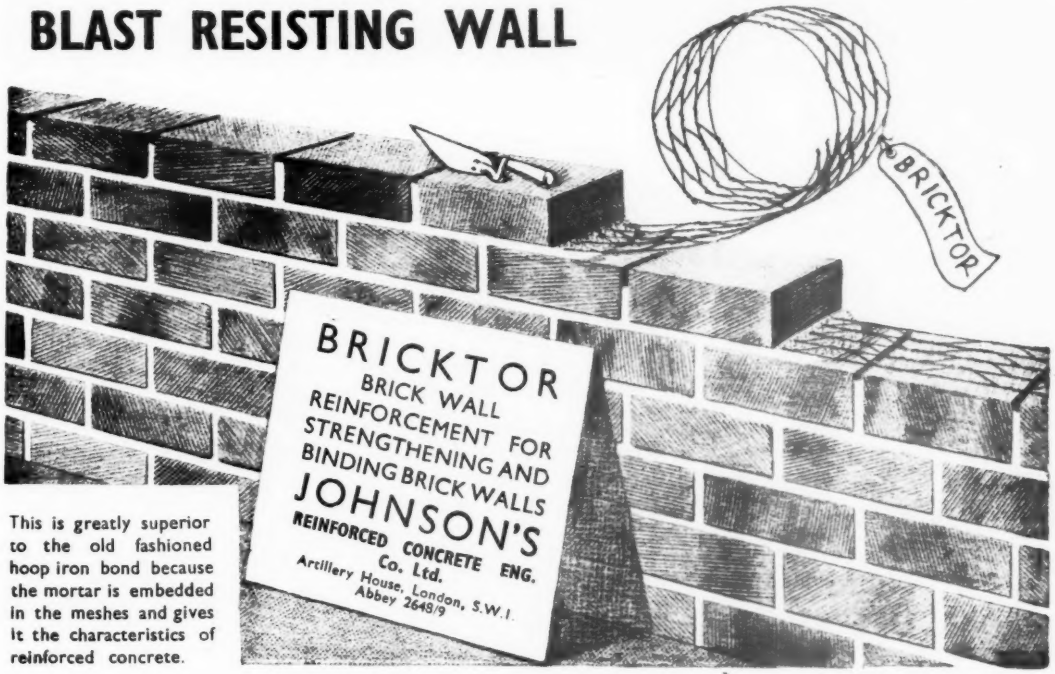

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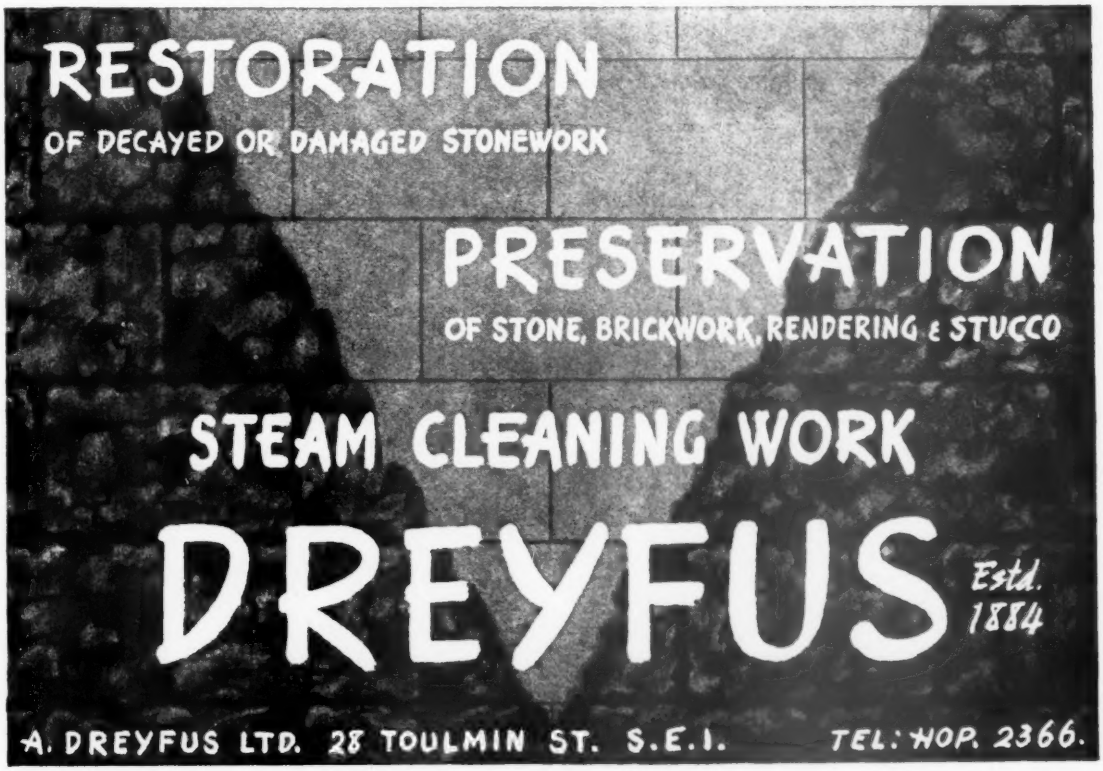

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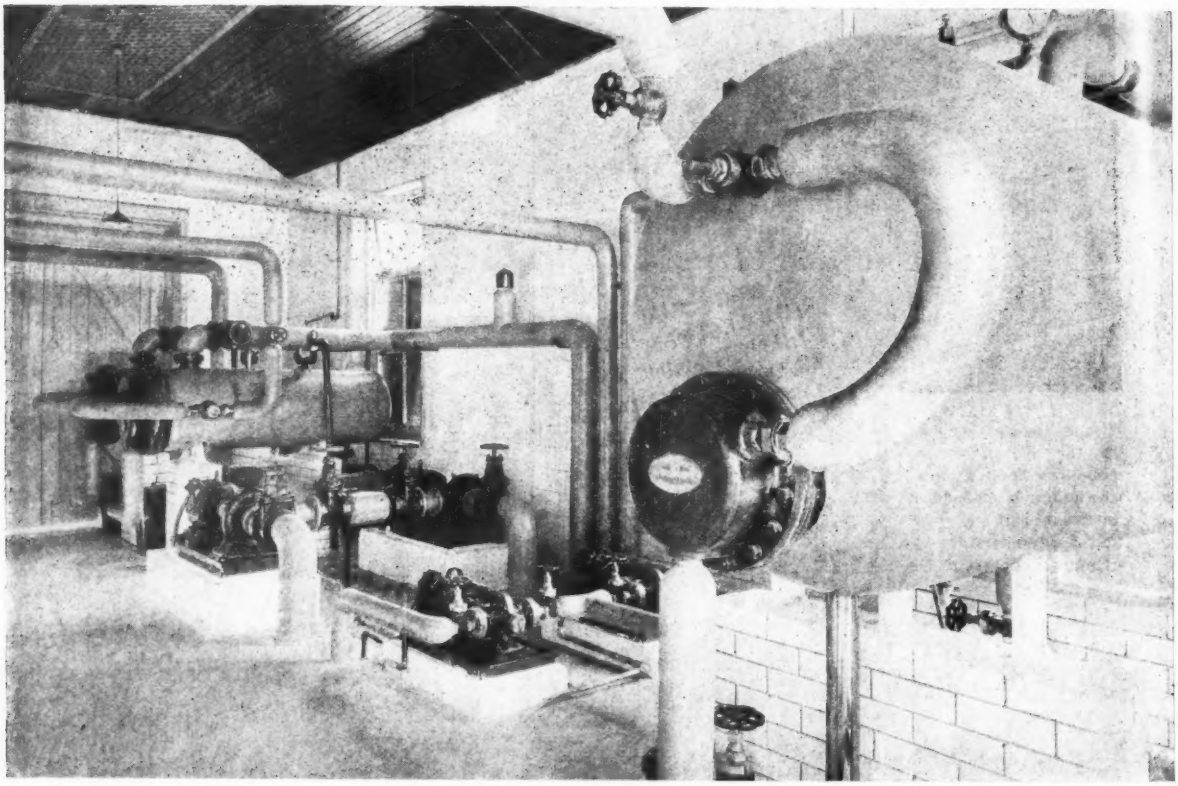

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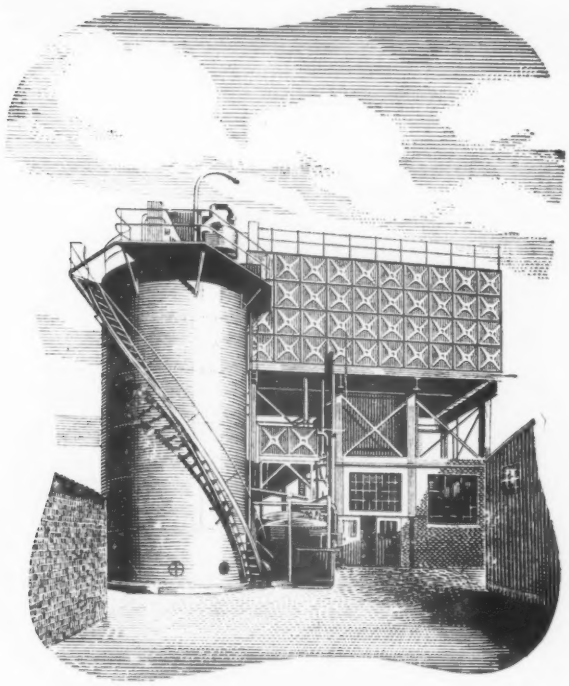

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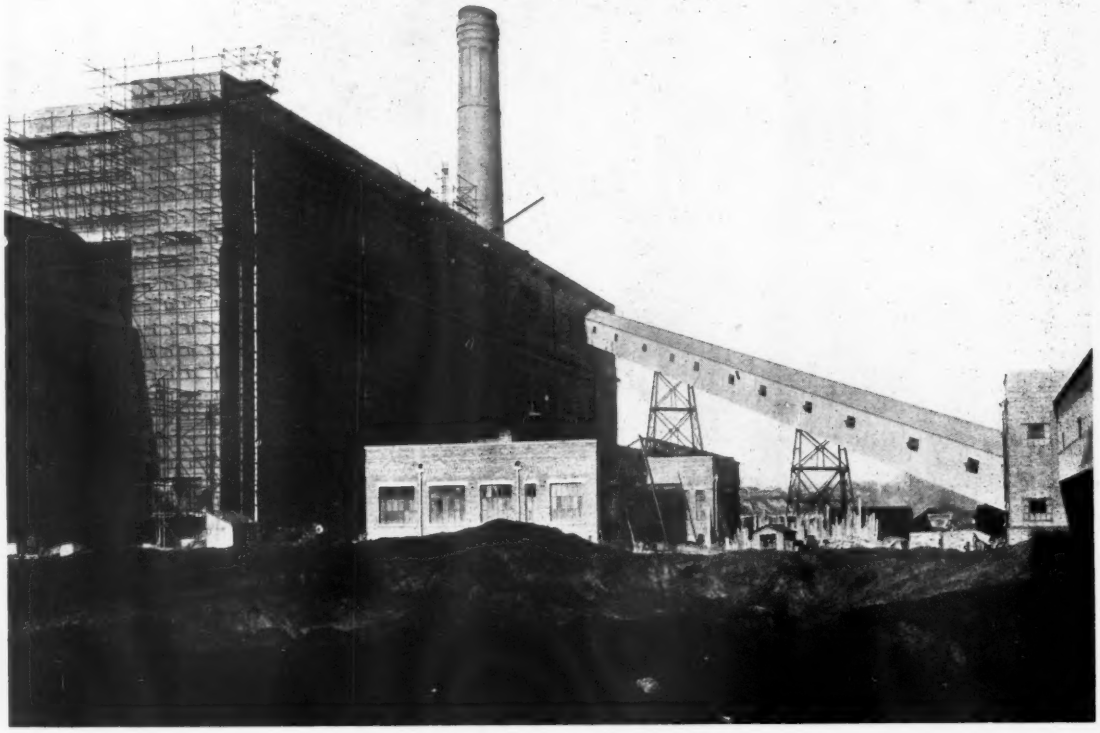

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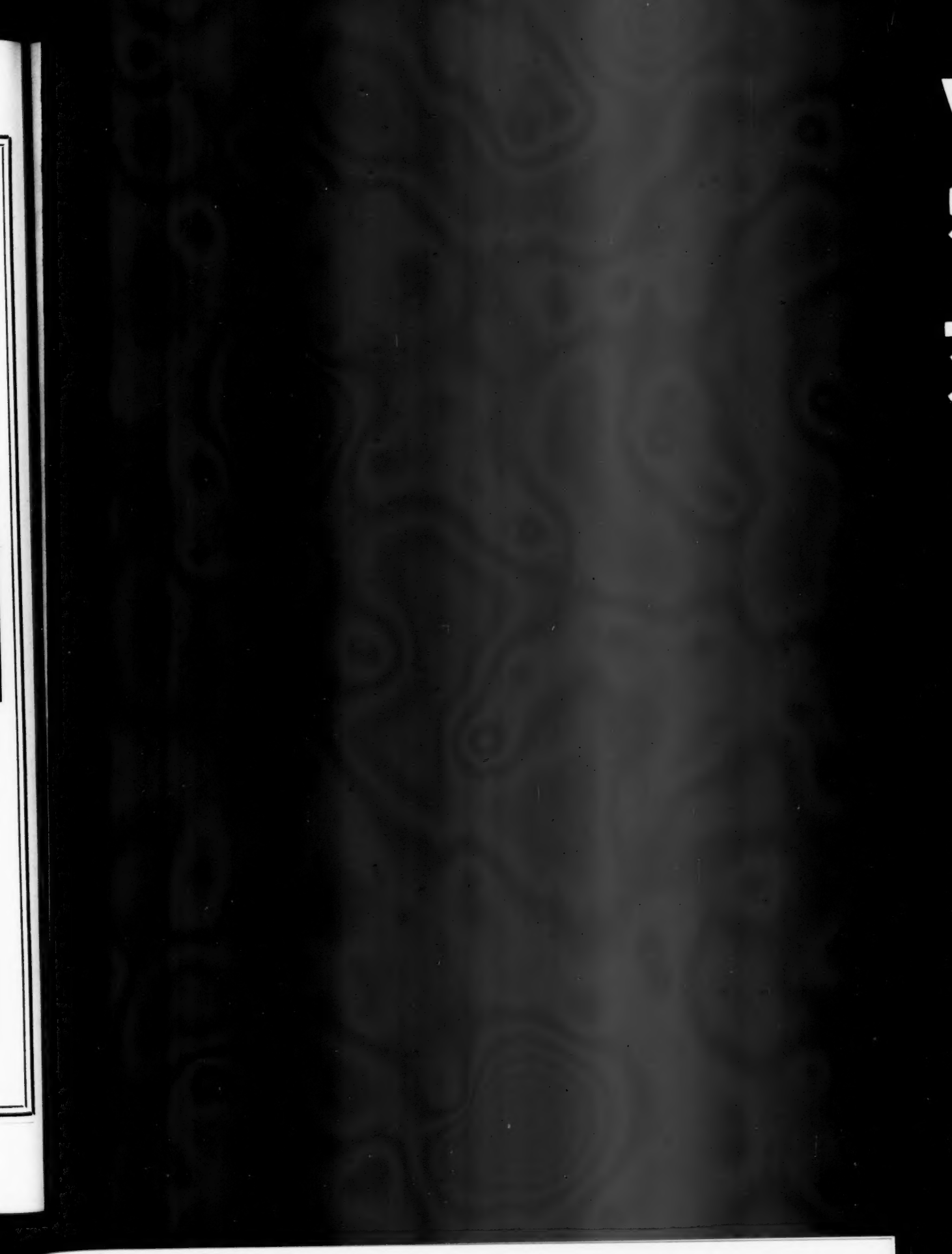
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